

ATTACHMENT C

**CONTRACTOR'S PROPOSAL TO RFP #2019-38-003
(REDACTED)**

ImageTrend Response to Los Angeles Fire Department's RFP No. 2019-38-003

August 14, 2019



Los Angeles Fire Department
Accounts Receivable – Public Counter
Attn: Contracts Management Section
200 North Main Street
Los Angeles, CA 90012

Michael J. McBrady
President & CEO
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IMAGETREND®

20855 Kensington Blvd., Lakeville, MN 55044 | www.ImageTrend.com

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SECTION 1: GENERAL INFORMATION



1.1 COVER LETTER

Los Angeles Fire Department
Accounts Receivable – Public Counter
200 North Main Street, Room 1620
Los Angeles, CA 90012

Dear Los Angeles Fire Department,

ImageTrend is excited and honored to present to you our response to the Los Angeles Fire Department's Request for Proposal No. 2019-38-003.

ImageTrend's distinction as a Department of Health Services compliant vendor, coupled with our 21 years of experience in pre-hospital data collection and our national presence, positions us to meet and exceed the needs of the City of Los Angeles Fire Department. We look forwards to your review of this proposal, speak with our clients and understand the ImageTrend community.

This proposal is valid for a minimum of 180 days from August 14, 2019.

I, Michael J. McBrady, am thrilled about the opportunity to establish a progressive partnership with the City of Los Angeles Fire Department. I am the authorized signatory for ImageTrend, Inc. and the legal binding authority. My contact information is below.

Sincerely,



Michael J. McBrady
President
mmcbrady@imagetrend.com



Joseph T. Graw
Chief Operating Officer
jgraw@imagetrend.com

ImageTrend, Inc.
20855 Kensington Blvd, Lakeville, MN 55044
Phone: (952) 469 – 1589 | Fax: (952) 469 – 5671

1.2 EXECUTIVE SUMMARY

ImageTrend, Inc. is honored to respond to the Los Angeles Fire Department (LAFD) RFP for an electronic patient care reporting (ePCR) system. We understand LAFD's objectives, current challenges and the importance of a flexible and configurable platform for ease-of-use, efficiency, increased accuracy and interoperability. Outside of the RFP's provided information, ImageTrend has reviewed the LAFD's published strategy for 2017-2020. We believe that our solution is best aligned with the vision and direction of LAFD's strategic plan.

ImageTrend's vision for pre-hospital data collection continues to chart a course towards new technologies. Electronic patient care reporting systems that meet municipal and national compliance, while allowing users an easy and enjoyable experience documenting incidents in the field, are the reasons ImageTrend has spent years transforming a solution that can be configured to meet agencies, such as Los Angeles Fire Department's, specific workflow needs. Elite is not built to define LAFD's incident workflow, but to provide LAFD with a configurable ePCR system uniquely implemented to your workflows.

ImageTrend Elite™ is an electronic patient care reporting (ePCR) solution that provides a secure method of collecting pre-hospital care data, extracting existing data, and exporting or sharing data with other agencies, hospitals, counties, states and applications. Elite is patient-centric and configurable, providing an exceptional user experience. Elite's adaptability is well-suited to Los Angeles' evolving needs.



Secure Method of
Collecting Pre-Hospital Data



Extract Existing Data



Export or Share Data

Elite delivers an exceptional user experience in the field, and for your administrators. The integrated capabilities with your hospitals and neighboring jurisdictions, many of which are utilizing Elite, will maximize efficiencies for your crews, and the reporting and analysis tools will bring insights and awareness to your community. This will provide LAFD the ability to identify possible resources and deficiencies while measuring effectiveness. Our configurability meets LAFD's commercial off-the-shelf requirements. ImageTrend Elite is:

- ✓ NEMSIS 3.4.0 Compliant
- ✓ NEMSIS 3.5.0 Roll-out Q1 2020
- ✓ LA County DHS Approved Vendor
- ✓ NFIRS 5.0 Compliant

We welcome an opportunity to demonstrate our solution in person. ImageTrend would be honored to partner with the Los Angeles Fire Department.

To learn more, see details and hear from our clients, visit www.ImageTrend.com/LAFD.

1.3 PROPOSER QUALIFICATIONS

With Elite, the City of Los Angeles Fire Department will be presented with the best possible solution. Elite offers administrator flexibility, an optimized user interface for efficiency and a powerful end-user experience. With ease-of-use of the utmost importance to both the end users and administrators, Elite offers LAFD Administrators configurability to make changes to the system, delivering tailored workflows, while increasing efficiencies for your crews and improving data accuracy. Some examples of the configurability available within Elite include giving you the ability to re-label and re-order fields, add supplemental questions (custom fields) and create your own validation rules and visibility rules that run real-time upon data entry.

Elite's design architecture allows your system to remain dynamic and adaptable to LAFD's evolving needs. ImageTrend has over twenty years of experience implementing software with unique workflows and data collection requirements. Our Client Services Team works with your administrators to develop an implementation plan that aligns with LAFD's needs and goals.

ImageTrend is proud to be one of a few vendors to have earned Los Angeles County Department of Health Services (LA DHS) compliance. We are also compliant with NEMSIS, HIPAA, NFIRS, federal, state, county, local regulatory and reporting requirements.



LA County DHS Compliance



ImageTrend recognizes that errors in documentation entry occur. Elite's validation engine follows rules built to NEMSIS and LA DHS compliance guidelines. LAFD System Administrators are able to edit existing validation rules, or build department specific rules that exceed national, state or municipal requirements.

Features within Elite that help to reduce errors and duplicate data entry, as well as improve quality controls include:

- ✓ Validation rules
- ✓ Power Tools™ - easy patient activity documentation tools
- ✓ Situation Tools™ - active protocol workflows
- ✓ Automated incident workflows
- ✓ Online and offline reporting capabilities

Elite comes fully equipped with a Continued Quality Improvement (CQI) module designed to allow LAFD to build limitless review categories for incidents meeting category criteria to flow into and be reviewed by users assigned to their specific review bucket. Reviewers can generate reports to view the data through either the CQI module or through Report Writer to give a comprehensive data report or benchmarking reports. Messaging can be linked to incidents automatically providing users with patient care feedback. These correspondences are tracked within the system with no limits on the number of messages attached

to the incident, for ease of review by any user with permission. Users with unread notes can reply to these similar to email, by accessing the Inbox after the user is logged in to Elite.

ImageTrend is positioned to meet and exceed LAFD's report generation requirements in a number of ways. Report Writer includes ad hoc as well as packaged reports that can include transactional, grouped reports or analytical reports. To provide LAFD with additional flexibility, the Data Mart enables technical staff, analysts and researchers to delve deeper by using your analysis and business intelligence tools against the data collected via your Elite system.



ImageTrend's solutions will assist LAFD in reaching their 2017-2020 "A Safer City 2.0" strategic goals by providing patient-centric integrated technologies, including:

- ✓ Telemedicine
- ✓ Community health initiatives
- ✓ SAFR health information exchange patient lookup
- ✓ Near real-time monitoring
- ✓ Enhanced disaster response capabilities

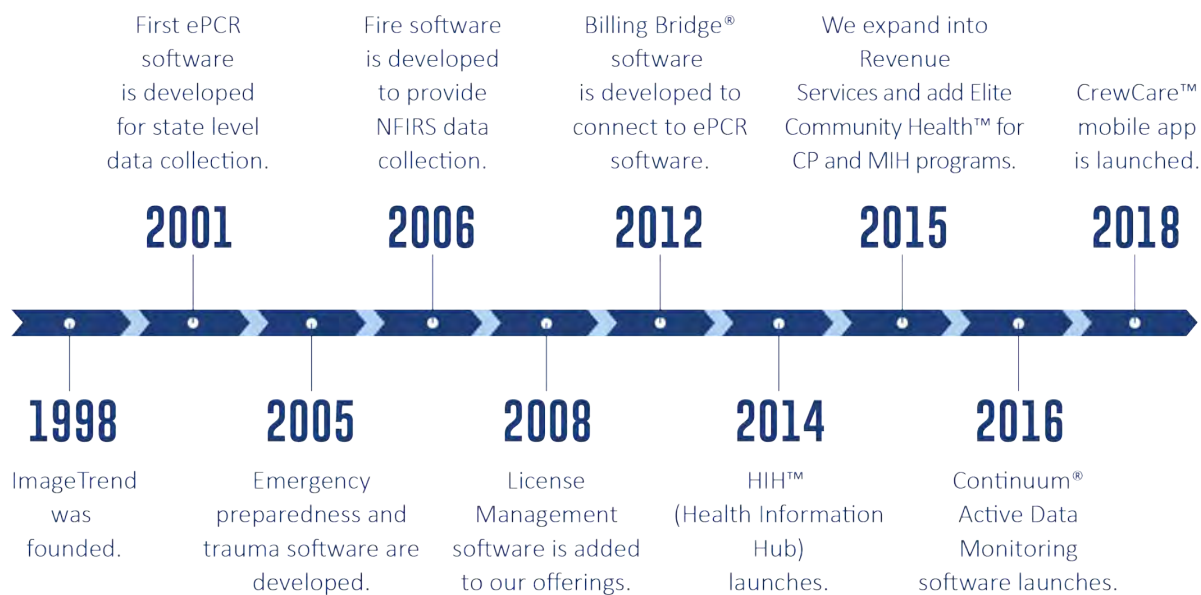
We are pleased to work with organizations that are industry leaders and are maximizing the benefits of ImageTrend's configurability, integrations and interoperability; service groups such as Houston Fire Department (TX), Dallas Fire Department (TX), Orange County (CA), Las Vegas (NV), Nashville Fire Department (TN), New Orleans EMS (LA), North Memorial (MN), and Milwaukee Fire Department (WI). We welcome and encourage LAFD to engage with these services to understand their experiences.

ImageTrend's transformative approach towards technology and customer relationships is what best positions us to partner with LAFD.

1.4 COMPANY OVERVIEW

ImageTrend was formed in 1998 and has remained committed to serving our community. From the company's humble beginnings, to our first state contract with Minnesota for ePCR data collection in 2001, to now being the largest provider of emergency services data collection, analysis and reporting solutions in the country, ImageTrend has never stopped being of service. Service is at the core of what we do every day. Our principal place of business is our corporate headquarters located at 20855 Kensington Boulevard, Lakeville, Minnesota 55044. We are proud that Lakeville is where all of our development, support, operations and services are located. We currently have 180+ employees to be at your service.

We have grown into numerous markets over our 21 years – emergency services, healthcare, license management, billing, research and clinical services – conducting research on topics surrounding first responder mental health and effective pain management. While our market reach has grown, our focus on customer intimacy remains ever present. Close, nurturing relationships with our customers are where we thrive as an organization.



As a company, we measure and align our successes with that of our customers. We are only beholden to our clients, allowing us the agility to do what is right and to always be a technology-driven, innovative company. Central to this approach is our autonomy and independence from any outside investment. As a direct result, we have experienced significant and sustainable organic growth while maintaining consistent and predictable financial stability.

> Our Capabilities

21+
YEARS

ImageTrend has been of service to the EMS and Fire communities of the country for over 21 years. Our solutions currently collect over 1.5 million incidents per week from over 5,200 clients.

1.5 Million



Incidents Entered On Average Weekly

Elite has been described by our clients as the most innovative, patient-centric and configurable solution available in the ePCR market today. It is designed for you to customize an exceptional user experience. No other product from any other vendor gives users that power.

We are entrusted by 38 states as their selected ePCR vendor. In addition to our enterprise systems, we have a presence in all 50 states among thousands of agencies and individual users.



1.5 FAILURE TO COMPLETE WORK AWARDED

ImageTrend has experienced no termination for default in the 21 years we have been in business.

1.6 MARKET POSITION AND STRATEGY

ImageTrend's market leading solutions in the EMS, Fire and hospital industries serve and connect our clients with what they desire; from our enterprise customers (38 EMS state systems), regional and large city systems, to agencies across the country. We are proud to acknowledge that our clients are influencers in quality improvement of patient care and demonstrating leadership in operational excellence.

ImageTrend's network of users has created a community that positively influences the market by sharing openly in many ways, such as: a library of shared run forms, our annual Connect Users Conference, an online Forum for open discussions and best practices along with our UserVoice platform, which provides a place to share ideas and suggestions for product development considerations. In addition, we celebrate innovation both internally and externally, hosting what we call Hooley Days and Hooley Awards, giving both employees and customers the opportunity to share ideas, tell their stories and inspire one another.



Legendary service is what we strive to deliver each day – from product development to support. We work each day to create solutions that allow you to create the workflow that best fits your department. No need to conform to what is given to you, but rather you have the ability to customize, giving your crews and providers what they need to do their job efficiently and accurately.



"ImageTrend has been a valuable partner for our ePCR and our Mobile Integrated Healthcare services. Based on their platform, product, customer service and innovative approach to integration within our systems, we would make the same decisions again to partner with ImageTrend."

– Doug Hooten, Chief Executive Officer | MedStar Mobile Healthcare

We are dedicated to the continued investment in our Clinical and Research Services Team, which provides insight into ImageTrend solutions, as a well as bridging the gap between data collection and a need for industry wide research, which has proven to be a key addition. This Team's contributions include the CrewCare project, our data monitoring platform Continuum and assisting clients in research and publishing their research.

Our R&D annual investment is the highest in the industry for ePCR and EMS support infrastructure systems, and ImageTrend will continue to invest in R&D and our Clinical and Research Services Team to offer the best connected solutions and serve the emergency services market. At ImageTrend we believe in the importance of connecting life's most important data.

1.7 USE OF SUBCONTRACTORS

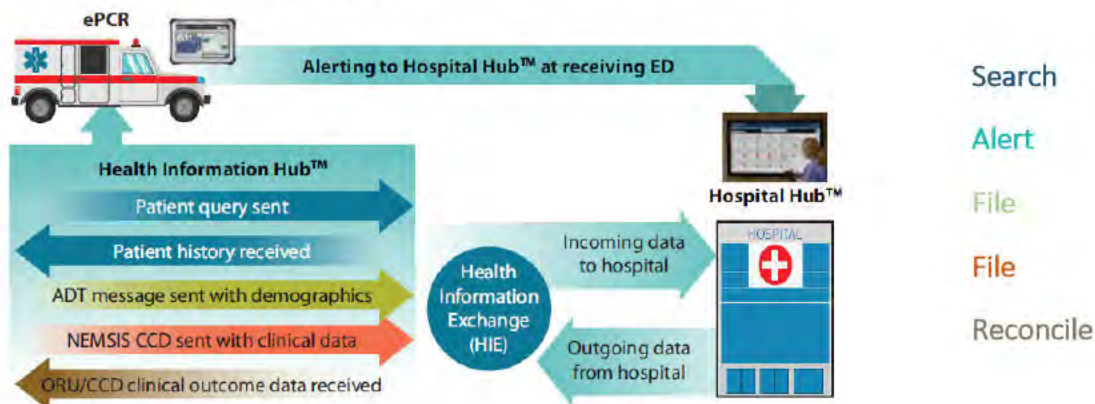
ImageTrend has not previously utilized subcontractor relationships, but if a partnership is beneficial to the project and services performed for LAFD, ImageTrend would welcome a relationship through the Business Inclusion Program.

1.8 EXPERIENCE AND REFERENCES

> A. Primary References

Primary Reference #1	
Agency Name	County of Orange – HCA
Est. total number of sworn/civilian staff	6,800
Est. population served	3,179,950
Est. number of annual calls for service	600,000 per year
Est. number of annual patient care reports	550,000 per year
Contact Name	Laurent Repass
Contact Title	OC-MEDS Program Manager
Contact Phone	(714) 788-9217
Contact Email	LRepass@ochca.com
Date ePCR contract signed/date ePCR first went live	August 2010
How is this reference particularly relevant to this project?	<p>This program has many agencies using the system for both Fire and EMS. The transfer of data from an ePCR to then completed NFIRS report was critical to them. They have executed the full California SAFR Health Information Hub (HIH) for a two-way connection to hospitals and the agencies in process as part of the CalEMSA +EMS program. They also use the ImageTrend Licensure tool for managing EMS licenses county-wide, as well as Patient Registry and our DataMart with Continuum for triggers and report distribution.</p> <p>http://www.healthdisasteroc.org/ems</p>

The SAFR Model is illustrated below:



Primary Reference #2	
Agency Name	City of Houston EMS
Est. total number of sworn/civilian staff	4,307
Est. population served	2,313,000
Est. number of annual calls for service	341,166 per year
Est. number of annual patient care reports	370,812 per year
Contact Name	Chris Souders, MD
Contact Title	Associate EMS Physician Director, Program Manager
Contact Phone	(832) 394-6812
Contact Email	Chris.Souders@houstontx.gov
Date ePCR contract signed/date ePCR first went live	August 2014
How is this reference particularly relevant to this project?	<p>This is a premier solution which has shown these following benefits and more:</p> <ol style="list-style-type: none"> 1. High volume EMS units managed efficiently 2. EMS and NFIRS records connected 3. Advanced use of the CQI module within a large volume team 4. Integrated into Mobile Healthcare / Telemedicine: ETHAN 5. Controls, validations, triggers easily added and changed for quality data collection 6. Efficient use in the field and automated through to billing 7. https://www.jems.com/articles/print/volume-40/issue-11/features/houston-ems-advances-mobile-integrated-healthcare-through-the-ethan-program.html



“Anytime you introduce a new tool to a department, you’ve got a challenge to change people’s thinking...It’s been a positive experience...I do like the fact that we were able to customize so many aspects of the run form to our service...letting us tailor everything to the needs of our organization.”

– Sundown Stauffer, Firefighter/Paramedic | Houston Fire Department

Primary Reference #3	
Agency Name	North Memorial Hospital
Est. total number of sworn/civilian staff	780
Est. population served	3,033,634
Est. number of annual calls for service	100,000 per year
Est. number of annual patient care reports	100,000 per year
Contact Name	Joe Glaccum
Contact Title	Director of Information Technology
Contact Phone	(763) 581-9976
Contact Email	Joe.glaccum@northmemorial.com
Date ePCR contract signed/date ePCR first went live	August 2016
How is this reference particularly relevant to this project?	This client is a dynamic user of the product, and can articulate the value of Elite ePCR and the configurable architecture.

When referencing the annual Connect User Conference:

"I like to network and it's fun to see the people that I've met over the last couple of years and talk about ideas. There is a million different ways to do things so it's always interesting to hear how other people accomplish the same things. I love seeing the ImageTrend staff too. The community is really great. I don't



have other software vendors that are like this. It's a fun environment to be around. ImageTrend is a great partner to work with and is in our backyard so it's always fun to be onsite."

– Nikki Anderson, Application Administrator | North Memorial Hospital

> B. Secondary References

City of Las Vegas Fire and Rescue

Contact Name: William McDonald
Title: Fire Chief
Email: wmcdonald@LasVegasNevada.gov
Phone: (702) 383-2888
Project Description: Elite EMS

City of Dallas Fire Rescue

Contact Name: Tami Kaye
Title: EMS Deputy Chief
Email: Tami.kayea@dallascityhall.com
Phone: (469)-323-5700
Project Description: Elite EMS

New Jersey Department of Health

Contact Name: Tim Seplaki
Title: Chief of EMS Data and Intelligence
Email: Timothy.Seplaki@doh.nj.gov
Phone: (609) 633-7777
Project Description: Elite EMS

> C. ePCR Client List

Name	Address	City	State	Postal code/zip
Advocate Healthcare Good Samaritan	3815 Highland Avenue	Downers Grove	IL	60515
Albuquerque Fire Department	11510 Sunset Gardens	Albuquerque	NM	87121
Allina Health Emergency Medical Services	167 Grand Ave	St Paul	MN	55102
State of Arizona	150 N. 18th Avenue, Suite 540	Phoenix	AZ	85007
State of Arkansas Department of Health	5800 West 10th Street Suite 800	Little Rock	AR	72204
State of Colorado	4300 Cherry Creek Drive South	Glendale	CO	80246
Dallas Fire Rescue	1500 Marilla St 4BS1	Dallas	TX	75201
Dekalb County	1300 Commerce Drive	Decatur	GA	30030
Fairfax County Fire & Rescue	PO Box 1147	Fairfax	VA	22038
State of Georgia	2 Martin Luther King Jr. Dr.	Atlanta	GA	30334
Houston Fire Department	1801 Smith, 8th Floor	Houston	TX	77002
Idaho Bureau of EMS & Preparedness	2224 Old Penitentiary Rd	Boise	ID	83712
State of Indiana	402 W Washington St. Ste E 241	Indianapolis	IN	46204
Inland Counties Emergency Medical Agency	1425 S D Street	San Bernardino	CA	92415
State of Iowa Department of Public Health	321 E. 12th St.	Des Moines	IA	50319
Kansas Department of Transportation	900 SW Jackson Room #1031	Topeka	KS	66612
State of Maine	152 State House Station 45 Commerce Drive Suite #1	Augusta	ME	04333-0152
State of Maryland	653 West Pratt Street Suite 208	Baltimore	MD	21201
State of Massachusetts	99 Chauncy Street	Boston	MA	02111
MedStar Mobile Healthcare	2900 Alta Mere Drive	Fort Worth	TX	76116
State of Michigan	WMed 1000 Oakland Dr	Kalamazoo	MI	49008-8060
State of Mississippi	1001 Woolfolk State Office Building	Jackson	MS	39201
Nashville Fire Dept/EMS	501 North West Street 63 Herm tage Ave	Nashville	TN	37210
State of Nebraska	301 Centennial Mall South PO Box 95026	Lincoln	NE	68509
State of New Hampshire	33 Hazen Drive CN-360	Concord	NH	03305
State of New Jersey	50 East State Street, 6th Floor 1301 Siler Rd. Building F	Trenton	NJ	08625-0360
State of New Mexico	Emergency Medical Systems Bureau	Santa Fe	NM	87507
State of Oklahoma	Procurement 000 NE 10th St	Oklahoma City	OK	73117
Orange County CA Emergency Medical Services	405 W. 5th Street Suite 301A	Santa Ana	CA	92701
ProTransport-1	PO Box 7260	Cotati	CA	94931
State of Rhode Island	3 Capitol Hill 700 Empey Way	Providence	RI	02980-5097
Santa Clara County EMS Agency	Office of Technology Services / Office of Finance and Support PO Box 44191	San Jose	CA	95128
State of Louisiana		Baton Rouge	LA	70804
State of Minnesota	1450 Energy Park Drive, Suite 200	St. Paul	MN	55108
State of New York Dept. of Health - Bureau of EMS & Trauma	875 Central Ave.	Albany	NY	12206
State of Wyoming	6101 Yellowstone Road, Suite 400	Cheyenne	WY	82002
Ventura County EMS Agency	2220 E Gonzales Road, Suite 130	Oxnard	CA	93036
State of Virginia	1041 Technology Park Drive	Glen Allen	VA	23059
State of Washington	PO Box 47853	Olympia	WA	98504-7853
Wisconsin Department of Safety and Professional Services	1400 E. Washington Ave.	Madison	WI	53702
State of Wisconsin	1 W Wilson Street PO Box 2659	Madison	WI	53703
State of Kentucky SB	300 North Main St.	Versailles	KY	40383
State of Oregon	3565 Trelstad Ave. SE	Salem	OR	97317
North Memorial Medical Center	4501 68th Ave N	Brooklyn Center	MN	55429
County of San Diego	6255 Mission Gorge Road	San Diego	CA	92120
Department of Homeland Security	245 Murray Lane Mailstop 0305	Washington	DC	20528
State of South Dakota Department of Health	600 East Capitol Ave	Pierre	SD	57501
CAL Fire Dept of Forestry and Fire Protection	1300 U Street	Sacramento	CA	95818
Memphis Fire Department	65 S. Front St	Memphis	TN	38103
Albuquerque Ambulance	4500 Montbel Place NE	Albuquerque	NM	87107
Riverside County EMS Agency	4210 Riverwalk Parkway, Suite 300	Riverside	CA	92505
State of Utah Department of Health	3760 S. Highland Drive	Salt Lake City	UT	84106
Milwaukee Fire Department	2333 North 49th Street	Milwaukee	WI	53210
New Orleans, LA	2929 Earhart Blvd	New Orleans	LA	70125
Las Vegas Fire Department	495 South Main Street	Las Vegas	NV	89101

1.9 PROPOSAL DEVIATION FROM RFP

ImageTrend has excluded no items in the proposal.

SECTION 2: FUNCTIONAL REQUIREMENTS



2.1 SYSTEM SOFTWARE CAPABILITIES – APPENDIX B

Please see the completed Appendix B, Software Capabilities Matrix, in Section 7.

2.2 DATA COLLECTION AND COMPLIANCE WITH STANDARDS

2.2.1 Requirement: The Proposer is required to provide a solution that is capable of capturing all of the information (data elements) required by various governing bodies, such as the Los Angeles County Department of Health Services EMS Agency and the National EMS Information System (NEMSIS). The specific data standards for which the Proposer must ensure compliance with are located in Appendix B: System Software Capabilities Response, Section 8.2.

Elite is compliant with NEMSIS 3.4.0 and maintains that compliance with ImageTrend's ongoing conversations with NEMSIS' Technical Assistance Center. This active participation with NEMSIS ensures that ImageTrend is best positioned to stay in alignment with dataset changes.

ImageTrend worked with LA DHS to gain compliance with their dataset. ImageTrend is prepared for any published modifications to this dataset and is able to implement those changes without delay.

2.2.2 Requirement: The Proposer is required to provide a solution that is capable of receiving and incorporating periodic updates to required data standards, since these standards are updated periodically by the issuing body and provided to the LAFD. The system must be capable of ensuring future compatibility with changes to data collection standards.

ImageTrend takes great pride in being compliant with national and LA DHS standards. ImageTrend actively participates in all NEMSIS meetings and assists in the direction of the NEMSIS dataset. Today, ImageTrend collects statewide EMS data in 38 states. This responsibility ensures that ImageTrend maintains NEMSIS standards. As changes are made to the NEMSIS dataset, NEMSIS requires vendors to complete a compliance process; ImageTrend recertifies every 1-2 years. Additionally, ImageTrend was certified compliant by LA DHS in February of 2019. We will continue to work closely with LA DHS on any upcoming changes to maintain compliance and testing.

Each change to the system is carefully planned so the user experience and data collection is not impacted. New values are added to Elite weekly and mapped correctly for each export that would be affected. ImageTrend maintains data integrity while simultaneously adding values for the customers to meet their needs.

2.2.3 Requirement: The Proposer is required to provide a solution that is capable of adding custom data collection fields from time to time, and incorporating them within an existing workflow so that the LAFD can collect additional information when needed. This information may be permanent (e.g., collect whether or not the patient is 'homeless') and/or temporary (e.g., collect specific information for a limited period of time during a trial or survey) in nature.

ImageTrend works closely with all customers as new data standards arise. We will work closely with you to understand what changes are on the horizon. ImageTrend will add or remove any values needed by LA DHS. These values would need to be mapped correctly to the LA DHS standard. ImageTrend would then test the new values with the County to make sure compliance is met. The values can be tested and placed in beta systems at ImageTrend before being released to customers. In addition, the Elite platform allows LAFD to create their own custom questions and worksheets that are able to be reported on.

2.2.4 Requirement: The Proposer is required to provide a solution that is capable of printing and/or creating electronic versions of required forms suitable for emailing and/or printing in the required format so that the form is acceptable to governing bodies or the form's owner. The purpose of this requirement is to ensure that required forms can be provided in an already approved format.

ImageTrend supports the use of Supplemental Questions. These custom fields, Supplemental Questions, can be built and added to the run form by LAFD without ImageTrend's assistance. There is no limit to the number of Supplemental Questions that can be added by the LAFD. Questions can be conditional and validated similar to any field created by ImageTrend. The types of questions supported are textboxes, memo, single-select, multi-select, date, date/time, integer and decimal. Once the field has been added to the run form it is immediately available to the end users once they sync their field device. These fields can appear in a matter of minutes on the run forms used by LAFD. The fields are also available in Report Writer allowing for answers that can be analyzed and reported against for actionable changes to be implemented at LAFD.

2.2.5 Requirement: The Proposer is required to provide a solution that is capable of modifying existing forms and/or adding new forms in the future, as the need arises.

The current Los Angeles County PDF is compliant with LA DHS. Elite has a Print Report Manager built into the solution capable of configuration. Based upon permissions, a user can create an unlimited number of printed formats. Some examples could include PHI data removed, while others are comprehensive and include all data with EKG strips. During implementation, ImageTrend will work with LAFD to determine a base set of printed formats that you could later change if desired.

2.3 MOBILITY

2.3 Requirement: The Proposer is required to provide a solution that exploits the growing demand for a mobile workforce and enhances the user's experience and efficiency by allowing them to work effectively in a mobile environment.

Elite Field is browser-based, which allows the software to operate in Windows, iOS and Android. Per RFP Sections 1.7.2 and 1.7.3, LAFD's current operating systems and browsers pose no compatibility issue. Elite Field allows the user to complete the PCR on the mobile device that is chosen by LAFD to best fit your workflow. Elite Field's sync process guarantees the latest configuration changes are brought down to the mobile device; this sync process occurs upon login every time the field device is utilized.

The user will utilize Elite Field to complete their ePCR without an internet connection available. The internet is needed to obtain CAD data or to post a record to Elite web. Repeat Patient lookup can be used with or without an internet connection depending on LAFD's desired workflow.

ImageTrend continually maintains compatibility with many different devices and operating systems to ensure the software will perform optimally. As part of our ongoing Quality Assurance process, ImageTrend regularly tests devices in order to ensure compatibility with EMS/Fire data collection. Because the system is browser-based, the type of device is less important than the internet browser and its capabilities.



Figure 1. Above are examples of Elite on multiple device types.

2.4 USABILITY

2.4.1 Requirement: The Proposer is required to provide a user experience that is easy to learn and that would be familiar to an average, non-technical user with experience using computers, the Internet and mobile devices.

ImageTrend works closely with our customers to design the user experience; each customer has the ability to design their workflow. Any field can be defaulted to an answer if desired. Elite has a similar design in all modules, allowing for ease of training of all users. Elite has different types of fields depending on the type of data being collected. There are big buttons for single selects, multi-selects and grids for one to many options.

The Validation Engine leads users down a path of completion. LAFD can require any field conditionally within the run form; the fields required can also be weighed. There is a validation score that tells the user what fields have not been satisfied in real-time and allows the user to quickly jump to the required fields. Additionally, system administrators can configure your run form to include closed-call rules. These rules prevent the posting of an incident until specific fields are satisfied.

Elite has the ability to scan driver's licenses via barcode reader or camera depending on the hardware being used. The user can use speech-to-text if the device supports it. LAFD's data can be auto-filled based on CAD data, EKG and repeat patients.

ImageTrend has developed Power Tools that allow LAFD to quickly document medications, procedures and patient care activities. Data can be defaulted so that in as few as one click, treatment can be entered. Situation Tools can also be created based upon protocol to walk users down the correct path of treatment depending on the incident. These tools ensure that treatment is correct, according to national and local standards, and documentation is quick and easy.

2.4.2 Requirement: The Proposer is required to provide the ability to capture digital signatures.

ImageTrend has digital signature capture that can be completed at any time in the documentation process. Signatures can be validated and required depending upon LAFD's workflow. The signature boxes can be enlarged for easy signature capture. Signature paragraphs, such as privacy statements, billing authorizations and refusals can be displayed in multiple languages. There is no third-party software required for signature capture.

2.4.3 Requirement: The Proposer is required to provide the ability to capture information from various documents, such as identification documents, insurance cards and medication lists.

Elite has the ability to attach files from within the PCR before or after data becomes available. Attachments can be added by using the camera on the hardware if available. Otherwise, attachments can be added through standard methods of browsing for the file on the device. A few possible examples of attachments are PDF, JPEG, PNG, Voice, or Video.

Additionally, Elite is able to scan in driver's licenses with the use of native camera hardware with our document scanning app.

2.5 EXTERNAL MEDICAL DEVICES

2.5 Requirement: The Proposer is required to provide a solution that can interact with and incorporate information that is received or otherwise collected using external medical devices, such as cardiac monitors (12-lead), AEDs and ultrasound devices, which may or may not be provided by the Proposer. The specific external medical devices currently in use by LAFD are listed in Appendix B: System Software Capabilities Response, Section 10.2.

Currently, ImageTrend is able to interface with Physio, Zoll and Philips monitors. EKG information can be transmitted to the PCR and data is incorporated into the correct fields in the run form. The six second strips and 12-leads are created as PDF attachments. The strips can be printed with the patient care report if desired. Elite supports EKG data transmission using Bluetooth, cable, or internet, depending upon EKG and device capabilities. Each EKG vendor has software they rely on to transmit the data to the patient care report. It is possible to include more than one device's data within a single patient care report. As an example, it is possible to have a first responder capture a 12-lead and later capture a 12-lead from an ambulance.

When a new device is introduced to the market, ImageTrend works with hardware manufacturers and our customers to make sure the dataset has a place to document the needed information within our application.



Figure 2. Medical device integrated with the ePCR and repeat patient historical incident data.

2.6 TELEMEDICINE

Requirement: The Proposer is required to provide a solution that can support the delivery of clinical evaluation and care from a distance using various telecommunications tools, such as video, audio and chat.

ImageTrend's previous experience with telemedicine has involved integrating with third-party video conferencing software. For example, Houston Fire Department's ETHAN project utilizes Cisco Jabber software with Panasonic FZG1 hardware to establish a video conference consultation. Elite was customized to immediately alert the ETHAN team based upon specified criteria being met.

ImageTrend is engaged with Microsoft to integrate their Teams for Healthcare program into Elite.

2.7 LOCATION VALIDATION AND MAPPING

2.7.1 Requirement: The Proposer is required to provide a mechanism for entering and collecting location information in a format that is compatible with existing systems that use geographical information and the LAFD GIS standards as described in RFP Section 1.7.13 GIS and Mapping.

Elite's primary incident GPS locations will generate from LAFD's CAD system to validate addresses entered into the PCR. The address field could be made read-only so that only data that has been validated could be entered. There is also a GPS button on the run form to document exactly where the incident occurred.

For any incidents missing latitude and longitude values, Elite's geocoding process will automatically generate incident coordinates to allow for all incident data to be geocoded and reported on.

2.7.2 Requirement: The Proposer is required to provide a means for visualizing information on a map as part of the user experience to enhance the user's understanding of the information being presented and/or efficiency in collecting it.

Report Writer has the ability to display historical and near real-time incident data either displayed over a map with pins or heat maps. Any packaged or transactional report can be exported to a mapping feature. Near real-time incident based mapping capabilities by user defined topics are available for internal and external data insights and sharing. Client specific map layers such as fire districts, response zones, stations, facilities, points of interest, etc. can be activated on both incident pins and heat maps to provide better insights for LAFD. This allows the user to visually see where incidents occurred. There is a GPS documentation button available in the patient care report that can pin point the location of the hardware device.

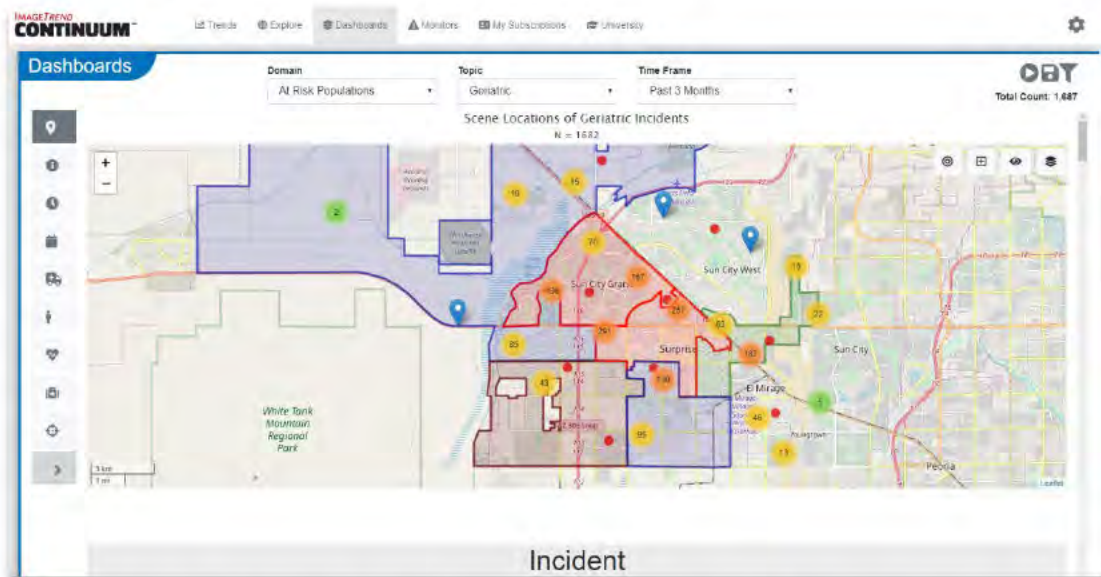


Figure 3. Example of Continuum's near real-time mapping capabilities with customized map layers.

SECTION 3: NON-FUNCTIONAL REQUIREMENTS



3.1 SYSTEM ARCHITECTURE AND INFRASTRUCTURE

3.1.1 Requirement: The Proposer is required to provide a commercially available, 'off-the-shelf' solution that addresses the functional requirements described in this RFP with minimal or no required custom software development.

Elite is the most configurable solution in the market today. LAFD has the ability to design run forms and workflows, along with making changes to data collection needs as desired within the application. ImageTrend assists with this process to ensure data integrity and proper mapping for billing, NEMSIS and LA DHS datasets.

ImageTrend is open to custom development when new functionality is requested by a customer. A customer may have an item that will only impact their agency. In these cases, a Business Analyst is assigned to the project to gather requirements from the customer.

3.1.2 Requirement: The Proposer is required to utilize a modern and fully supported software environment that has been designed for the expected function, size and scale of the LAFD.

Elite is solely developed and maintained by ImageTrend staff at our Lakeville, MN headquarters. Elite contains all necessary components within the Elite framework without need for additional licensed software.

Elite utilizes the latest .NET and SQL server technologies, with the most up to date software languages providing scalable solutions. Utilizing this technology, Elite Field is uniquely suited to operate in remote, disconnected environments on any supported browser.

Elite releases software updates, including maintenance and enhancements, each month. ImageTrend seeks input from our clients through our UserVoice platform, support tickets, or Statements of Work to assist in the development of new enhancements. You are able to select which release round for new software – this gives you the flexibility of planning for your system updates. ImageTrend closely monitors industry and healthcare trends and provides software enhancements to meet the ever changing health care needs.

3.1.3 Requirement: The Proposer is required to utilize a modern and fully supported hardware and infrastructure platform that has been designed for the expected size and scale demands of the LAFD.

ImageTrend's focus on our enterprise applications has always been with the mindset of scalability and performing to meet the needs of the most resource intensive EMS departments in the country. Elite is engineered to operate inside of varying hosting solutions and methodologies. Elite's enterprise design scales well for LAFD because the solution we will deploy is a single-tenant setup. This approach ensures that LAFD's dedicated ImageTrend provided hosting resources are solely used by LAFD –

application servers, database server resources, reporting servers, etc., are all reserved only for LAFD's use.

One of these single-tenant solutions is Microsoft Azure. Azure and Elite are uniquely positioned to remain responsive to the changing and growing needs of LAFD. ImageTrend is able to dynamically scale to meet the performance and stability needs of LAFD as the department grows.

ImageTrend also operates its own physical infrastructure out of multiple data centers, one of which is located in Eagan, MN and another located in Dallas, TX. Our approach for this hosting solution is similar to an Azure or other cloud-hosting environment. This similar single-tenant approach also ensures LAFD's resources are utilized only for LAFD and is equally as scalable.

3.1.4 Requirement: The Proposer is required to provide a system that is capable of storing a minimum of ten (10) years of historical data so that these records are immediately and fully available to system users.

ImageTrend utilizes Microsoft SQL for the database and has been collecting patient care reports for more than 21 years. ImageTrend has worked with customers on data retention policies to make sure that all data is available to the customers. Following your provided annual run volume, ImageTrend sees no issue with holding your historical data over the coming ten years.

3.1.5 Requirement: The Proposer is required to support the ability to access the system using office located, network-connected (wired, wireless, public broadband) desktop/laptop computers.

- ✓ On iPad/iOS: Safari only
- ✓ All other hardware/OS platforms:
- ✓ Recommended browser is Chrome
- ✓ Latest Chrome, Chrome Mobile, Safari, or Firefox browsers
- ✓ Microsoft Edge** (25.10586.0.0 or higher), Microsoft Edge HTML (13.10586 and higher)
- ✓ Elite can run on current LAFD computers. Other hardware being utilized is dependent upon operating systems and browser versions. Specific requirements are in 3.1.6.
- ✓ ImageTrend recommends a minimum bandwidth for wireless is 4G/LTE service and a wired network connections of 100Mbps for optimal performance.

3.1.6 Requirement: The Proposer is required to support the ability to access the system using handheld, tablet and/or other mobile devices, such as those devices described in the Proposer's response to 2.3 Mobility above.

- ✓ On iPad/iOS: Safari only
- ✓ All other hardware/OS platforms:
- ✓ Recommended browser is Chrome
- ✓ Latest Chrome, Chrome Mobile, Safari, or Firefox browsers
- ✓ Microsoft Edge** (25.10586.0.0 or higher), Microsoft Edge HTML (13.10586 and higher)
- ✓ ImageTrend has customers successfully using iPads and Windows devices, on 4G LTE service, optimized for screen sizes of 7" or larger.

3.2 SYSTEM SCALABILITY AND GROWTH

3.2 Requirement: The Proposer is required to provide a system that can scale and grow, as the LAFD's needs change over time. The system's performance and capacity must be maintained and able to adapt to changing system use and needs over time without requiring full replacement of underlying technology hardware or software platforms.

Elite was built as an enterprise system capable of handling millions of records. Elite can scale horizontally (by adding more servers in the Elite "cloud") or vertically by adding more CPU or ram resources to the existing Elite servers.

3.3 SYSTEM PERFORMANCE

3.3.1 Requirement: The Proposer is required to provide system availability of no less than 99.9% that allows for no more than ten minutes of system downtime per week or eight hours per year, for any reason.

ImageTrend guarantees 99.9% uptime for LAFD. We have redundancies built into both the application and database servers, meaning if any one server goes down/offline, Elite will not be affected. In the rare case that the web-based Elite is inaccessible, users can continue to create and document ePCR reports utilizing Elite Field. If the Elite site is hosted and managed by ImageTrend's IT staff, several different types of monitoring and alerts are enabled to ensure quick response and maintenance.

3.3.2 Requirement: The Proposer is required to provide a system design that accounts for no single-point-of-failure and provides system resiliency sufficient to maintain the required system response time and uptime regardless of the cause of the failure. The system must be able to detect and recover from failures with minimal to no human intervention.

Redundancies have been built into both Elite and database servers, meaning if any one server goes down/offline, Elite will not be affected. In the rare case that the web-based Elite is inaccessible, users can continue to create and document ePCR reports utilizing Elite Field.

3.3.3 Requirement: The Proposer is required to provide system response times sufficient to maintain the user's attention and not interrupt the normal workflow, even during periods of peak use.

ImageTrend has many clients using Elite on a daily basis, with thousands of users accessing a single site, entering tens of thousands of incidents per day. Clients of comparable size: large departments, regional LEMSA services throughout California, county and state systems across the United States, make up the primary client base of Elite.

Elite is architected to run in a cloud-based environment, meaning if resources become unavailable it does not impact the application availability. For example, the calculated up-time for the City of Houston Fire Department, for the past 12 months, was 99.97%.

3.3.4 Requirement: The Proposer is required to provide the user with sufficient feedback when system response times are slower than expected, so that the user is fully aware of the operating condition of the system (e.g., system is up/down) and knows what to expect (e.g., to wait, to retry, to call for assistance, etc.)

ImageTrend has internal alerts set up to determine if a site goes down or shows delayed server response times. If ImageTrend is performing server maintenance, or the site is down, a friendly message will display at the top of the Elite user interface notifying the user that the website is inaccessible. During this time, Elite Field incidents can be entered and documentation can be performed.

Your site is monitored for slow page load times, CPU utilization and other various performance metrics. ImageTrend uses proactive site monitoring insights and helps prevent your site from going down.

3.3.5 Requirement: The Proposer is required to provide a mechanism for conducting periodic system performance testing that accurately simulates the expected number of users and tests both system performance in terms of response time under expected maximum peak load and resiliency in terms of component failures. The LAFD expects the Proposer to conduct performance testing before any new major release, and to make the testing results available to the LAFD for review before the release is placed into production.

ImageTrend offers access to Elite Test Sites that act as a test environment for LAFD to test releases pushed to test sites prior to the release on a production site. ImageTrend runs nightly automated performance tests against a pre-defined production Elite site. Any test that fails is addressed prior to release. Due to the number of unique configurations each site may have, it is atypical for ImageTrend to publish test results.

3.3.6 Requirement: The Proposer is required to provide a mechanism for monitoring system performance and proactively alerting support staff of performance anomalies that may negatively impact system performance and/or uptime.

ImageTrend has internal alerts that monitor system up-time and performance, as well as page load times. ImageTrend realizes that LAFD's system is mission critical requiring constant monitoring. In the event that a major anomaly occurs, we will proactively provide communication. Internal processes have been established and are effective in monitoring, including high CPU usage on a VM or blocking queries on a database.

3.4 DATA PROTECTION AND RECOVERY FROM FAILURE

3.4.1 Requirement: The Proposer is required to provide a system design that protects against data loss and/or corruption due to unforeseen system and/or component failures.

Each Elite SQL database is replicated in real-time to a second database within our data center as well as a third database that is in a data center in a different state. The application itself also has safeguards built in to prevent data loss, such as the Elite Field cloud. For more detailed information please see our confidential Disaster Recovery Plan included in Section 5: Optional Appendices.

3.4.2 Requirement: The Proposer is required to provide a system design that ensures that an unforeseen system outage results in minimal or no data loss.

Elite Field has a mechanism in place to help prevent data loss. This functionality is called the Field Incident Cloud. During the usage of Elite Field, the incident data (with the exception of attachments) being entered is synced behind-the-scenes (when an internet connection is present) to one of our hosted servers in real-time. It is available – if needed – via a permissions-driven administrative page. This allows for data recovery if either the software gets corrupt or if the computer/tablet itself gets destroyed.

On the server side, incremental backups occur every 15 minutes. If we have to restore one of these to recover data, we would work with LAFD on the process and what, if any, gaps we would have to address.

3.4.3 Requirement: The Proposer is required to provide a system design that allows for full system recovery from an unforeseen system failure of no more than 15 minutes.

Full database backups are generated every 24 hours. In between those full backups, incremental backups are taken every 15 minutes. In the case of a system failure, the ImageTrend IT Team will be responsible for making sure all of the server components get restored to their fully-working state. We will also be in communication with LAFD's team during these scenarios. For more detailed descriptions of what goes into this (as well as roles and responsibilities and estimated timelines), included in Section 5: Optional Appendices, is our Disaster Recovery Plan.

3.4.4 Requirement: The Proposer is required to provide a mechanism for entering handwritten reports into the system following a system failure or outage where the system is unavailable.

ImageTrend does not envision a time hand written reports would be needed. Elite Field will allow users to complete PCRs even if the Elite web is unavailable if internet is down. The user can continue normal use and hold on to the incidents until the system or internet connection is restored.

Data entry can be completed on paper and then entered into the system at a later time. All automated workflow triggers will still occur no matter when an incident is entered.

3.5 SYSTEM ENVIRONMENTS

Requirement: The Proposer is required to support the ability to conduct system maintenance, training, development, configuration and testing without interruption to the production systems.

Each Elite system has a “demo/training” area than can be configured and tested without interrupting service to the system. The administrator could make changes to run forms and validation rules for testing. Later, these changes can be applied to the “live” agency. No extra hardware or software is needed to accomplish this.

3.6 RELEASE MANAGEMENT AND VERSION CONTROL

3.6.1 Requirement: The Proposer is required to provide a mechanism for predictably managing releases, enhancements and/or customizations, including updates, patches and upgrades in a manner that is not disruptive to in-production operations.

Maintenance of ImageTrend software includes scheduled updates and new releases, as well as defect corrections and new functionality. Specific out-of-scope system enhancement requests will be reviewed with LAFD and subject to approval if additional changes are necessary.

Elite releases one major update each month. Prior to each release going out, it goes through a full round of manual and automated testing from the ImageTrend QA Team. If the QA Team rejects any item, it gets fixed by the Development Team and then the QA process is started over. Once it passes this round of testing, a site in our production environment is updated and another round of QA is performed.

Each release is tested to ensure that configurable settings within each Elite site are not altered.

LAFD has control over when updates are released to the site; multiple round releases exist, which give you the flexibility of choosing when your system is updated.

3.6.2 Requirement: The Proposer is required to keep system software, including third-party software, up-to-date with any required release patches or updates and major releases within one version of the fully supported current version. All proposed software versions must be generally available and operational in a comparable production environment on or before the proposal deadline.

Elite does not manage (or require installation) of any third-party software in order to function. There are two cases where third-party software is integrated into Elite: the driver's license scanning functionality and EKG linking. In these cases, we adopt and test their updates as soon as they become available, and package them into a future Elite release.

3.7 DATA RETENTION AND ARCHIVING

3.7.1 Requirement: The Proposer is required to provide a capability to maintain various data retention policies that may change over time.

By default, Elite does not delete/archive any data. If you have a data retention policy, we will work with you to set up parameters to auto-archive records.

3.7.2 Requirement: The Proposer is required to maintain 'active' or 'open' system records indefinitely, so that they are immediately and fully available to system users.

By default, Elite retains all incident records entered (or imported) into the system. If the site is hosted by ImageTrend, normal storage growth is covered by your annual support agreement.

3.7.3 Requirement: The Proposer is required to provide the capability to permanently delete or 'purge' records in a manner that complies with Departmental, local, state and federal guidelines.

If LAFD would like to set up an auto-archive, the process will occur via a scheduled task on our hosted server. Each record that is auto-archived will get recorded in a specific log (that includes a timestamp plus identifiers such as incident number and call sign).

3.7.4 Requirement: The Proposer is required to provide a mechanism to make all ePCR data available in its native format for use by the LAFD for reporting and other data analytics needs independent of the ePCR production system in a timely manner and without restriction of use.

Report Writer hits a data mart of replicated data (this is done to ensure that reports do not affect the performance for the daily users of the Elite site). There are several different groups of data to report off of in the data mart – including, but not limited to, all EMS fields, personnel, or facilities. This data is replicated every 5-60 minutes, depending upon the type of data syncing. In addition to an ImageTrend-hosted data mart, we also offer the capability to sync this data mart to a SQL database in your hosting environment. You are then licensed to hook up any reporting tools you may have/use to this database (such as Power BI).

3.8 DIGITAL CONTENT MANAGEMENT

Requirement: The Proposer is required to provide a system capability to collect and store digital media content that is associated with a record as part of the ePCR workflow.

Elite has the ability to attach many different types of files. The user can add attachments using the mobile patient care report or add them after the incident is completed. The user can add attachments via a button within the EMS run from. The user is given the option to use the camera on the device, or search for the item to attach. The system will allow attachments that are video, voice, Word, PFD, Excel, JPEG, and PNG to name a few types.

3.9 SYSTEM ADMINISTRATION

3.9.1 Requirement: The Proposer is required to provide a mechanism for administering the system. This includes the ability to make changes to system values and configurations that are required to meet operational needs.

ImageTrend recommends you have at least three system administrators that work together to manage the system. LAFD System Administrators would have the ability to configure the system and make instant changes if desired. LAFD System Administrators would have the ability to remove choices from picklists along with changing labels to make data entry more efficient. There are several tools built into Elite that are used to administer and configure the run form and your workflow. Some of these include the Form Manager (show/hide fields on the form and change the layout), Validation Rules builder (choose which fields are required and when), Dataset Manager (change the values that exist within pick lists), etc.

In our experience, Elite administrators do not need to be IT professionals, but have a desire to work in the system with an EMS background. These administrators should be part of the implementation process and go through administrative training.

By having more than one system administrator, you create operational redundancies to ensure personnel changes cause no disruption to the system.

3.9.2 Requirement: The Proposer is required to provide for the ability to monitor and manage system performance, such as uptime and responsiveness.

ImageTrend utilizes a number of different internal tools to monitor system uptime and performance. We also use a third-party tool and are open to a discussion with LAFD regarding choices on exposing an uptime checker.

3.10 DATA MANAGEMENT

3.10.1 Requirement: The Proposer is required to provide a mechanism for administering system records, making administrative changes and maintaining data quality.

ImageTrend developed an intuitive validation system for patient care reports. The validation engine works using conditional logic to ensure that data is collected correctly when entered by the user. After an EMS record has been filled out by a provider, an administrator still has the capability to change specific data elements within an individual record. Any changes made to a record using this workflow is audited.

3.10.2 Requirement: The Proposer is required to provide the ability to comply with local, state and federal requirements for privacy and confidentiality (e.g., HIPAA) by making records and/or parts of records only available to certain users who have authorized access to those records.

The ImageTrend permission engine allows LAFD to create as many permission levels as needed to ensure each user has the amount of access needed to complete their job. The permission group for providers is typically set up so that you will only have access to those EMS records that you are a crew member on. It is also possible to limit who can print patient reports, or what print template is available to the permission group.

In addition, Elite allows for the functionality to create status types that are tied to permission groups. For example, this would allow LAFD to specify specific incidents as not being able to be viewed by anyone except administrators.

3.10.3 Requirement: The Proposer is required to provide the ability to use and administer standardized code values, such as federal, state and local codes and ordinances (e.g., LA-EMS Data Dictionary, NEMSIS, NFIRS).

ImageTrend is committed to all state and local standards utilized by LAFD. Upon the start of implementation, Elite will be supplied with the latest codes from LA DHS, NEMSIS, and NFIRS. As codes are added or updated for each of these entities, ImageTrend will update its software in a timely manner to remain compliant. ImageTrend implements all code changes to a beta (pre-release) environment for quality assurance testing prior to the official release to client systems.

3.11 USER IDENTITY AND ACCESS MANAGEMENT

3.11.1 Requirement: The Proposer is required to interface with the City's central identity management system for maintaining user information and access controls.

Elite does not support integrating with third-party identity management systems. This is mainly due to the offline capability of Elite Field. In order for Elite Field to operate while disconnected, each user must have the ability to login (while there is no internet). Because other identity management systems do not expose passwords (for good reason), there is no way for Elite Field to sync those credentials (for offline usage).

3.11.2 Requirement: The Proposer is required to provide system access controls sufficient to manage access to various system capabilities and functions, based on the user's role, and comply with City, State and Federal security requirements.

The Elite Permission engine is granular and controlled by LAFD. The number of permission levels is unlimited to allow each user to have only the access they need. ImageTrend uses Hidden, Read-Only, Edit, Add, and Delete as the choices for almost every aspect of the system. Permissions can go further to determine who can print, change the status of an incident, or lock or unlock patient care reports. This engine allows LAFD to control access to their solution. All permissions are applied to all aspects of the Elite platform from the website to Elite Field.

3.12 SYSTEM SECURITY AND DATA PRIVACY

3.12.1 Requirement: The Proposer is required to prevent unauthorized system use and access.

Each user is granted a username and password. The system makes the user enter this each time they access Elite or Elite Field. The password complexity, length and use of special characters is determined by LAFD. LAFD can also configure the invalid login attempts number. With this turned on, a login account would be locked out of the system if a certain number of incorrect attempts was made in a row. Elite also supports two-factor authentication if LAFD chooses to utilize it.

Passwords are able to be set to expire after X amount of days.

3.12.2 Requirement: The Proposer is required to protect data 'at rest' and 'in transit' so that unauthorized users cannot access it.

Elite encrypts all data while at rest (using industry best practices and algorithms) and while at transit (requiring HTTPS). ImageTrend monitors for unauthorized access at the firewall layer.

3.12.3 Requirement: The Proposer is required to provide data access controls that allow a system administrator to set access and/or authorization that may vary depending on data within a record, such as Protected Health Information or incident type (e.g., Dead on Arrival, High Profile Incidents, etc.).

Elite allows for the functionality to create status types that are tied to permission groups. For example, this would allow LAFD to name specific incidents as not being able to be viewed by anyone except administrators. These statuses can be automatically changed as part of your workflow, or changed on an individual record due to certain circumstances.

Additionally, each time a record is accessed/opened, the user and timestamp is audited. LAFD can also require a reason to be filled in every time an ePCR record is viewed or printed.

3.12.4 Requirement: The Proposer is required to maintain compliance with Health Insurance Portability and Accountability Act (HIPAA) standards for data privacy and protection.

ImageTrend applications meet or exceed state and federal data privacy requirements and the HIPAA guidelines. Secure logins are an industry standard process and are part of the HIPAA guidelines for data protection. These are implemented throughout the application with the use of the multi-tiered hierarchical security access features of the ImageTrend security module, which provides the environment for controlling the access necessary to provide data protection.

3.13 SYSTEM LOGGING AND AUDIT

3.13.1 Requirement: The Proposer is required to provide for the full audit and logging of both authorized and unauthorized system activity and user interactions with the system including, but not limited to, logins, data changes and record views.

Elite has a robust audit tracking engine. Each user login is tracked to the date and time of entry. Inside of the patient care report a history is tracked of every save or print tied to the user. Additionally, every time a record is simply accessed, that click is recorded.

If a report had been locked and later unlocked by someone with enough permissions, a detailed audit log is started (that tracks the changes for every value). In the detailed audit log you can see what fields were changed by the user on what date and at what time. The original values are also saved with the change to specifically see what data was modified.

3.13.2 Requirement: The Proposer is required to provide a mechanism for searching and reporting on system activity information to aid in troubleshooting, training and investigation of unauthorized use.

In Elite there is a history tied to every patient care report. In that history you can track the users that have opened that report, saved, printed or changed data. Additionally, these incident history items are exposed within Report Writer. This would allow you to audit all action for a given individual.

3.14 SYSTEM INTERFACES AND DATA EXCHANGES

3.14.1 Requirement: The Proposer is required to provide a mechanism for exchanging information with other systems where information is passed to/from the ePCR system at predefined intervals, from one-time and recurring batch to near 'real-time', using a predefined protocol, format and layout in order to support a specific function or operation.

Elite offers various data exchange methods. Two such methods include NEMSIS web services or secure FTP file drop. Both methods utilize near real time queries to identify incidents requiring export to a secure location for consumption by a third party.

3.14.1.2 Requirement: The Proposer is required to provide an interface to CAD that can support the ability to receive CAD calls for service information to aid in the timely and accurate completion of ePCR records using information that has been recorded in CAD.

ImageTrend's preferred method to interface CAD data into Elite is secure file drop to a folder within your network. ImageTrend will then push the file via secure web service to your Elite database for consumption and availability for LAFD personnel to download. Implementation involves mapping received CAD values into ImageTrend/NEMSIS values for seamless integration within the ePCR. Users can expect creating an ePCR record, filtering by unit, and downloading the appropriate CAD record at any time. CAD records can be re-downloaded to receive the most up to date information whenever available.

3.14.1.3 Requirement: The Proposer is required to provide an interface to the LA County EMS agency that is acceptable to the County, and be able to comply with the County's requirements for submitting EMS data.

Elite has been compliant since February 2019 by the County EMSA to submit data. ImageTrend includes an automated export to the County EMSA that triggers reports to be submitted based on LAFD's criteria when a record is ready to be submitted. Examples of triggers could include an incident reaching 100% validation, Ready for Export status or combination of both. ImageTrend will work with LAFD to determine the appropriate criteria to be used to submit data to the County EMSA. When a record is sent to the County EMSA, there is an audited history record attached to the incident.

3.14.1.4 Requirement: The Proposer is required to provide an interface to California Emergency Medical Services Authority that is acceptable to the State, and be able to comply with the State's requirements for submitting EMS data.

Elite is currently utilized as the data repository for the State of California. ImageTrend is also the state EMS data collection vendor in 37 other states. Elite has an Auto-Post system to send EMS records to

any NEMSIS 3 web service, including the State repository. The Auto-Post allows LAFD to determine when a record is ready to be sent to the State EMSA. An additional example is when a record is locked and marked as reviewed, it could be submitted to the State. There is also an export history showing all transmitted records. There is a log that shows if the record was successful or unsuccessful. If the record failed, there are details to explain what caused the record to fail.

3.14.1.5 Requirement: The Proposer is required to provide an interface to the R1 RCM system that is suitable for maintaining the LAFD's billing requirements.

ImageTrend has a long standing relationship and export with R1 RCM. The export is based upon business rules that are determined by LAFD and R1 RCM, resulting in R1 RCM receiving calls in a timely manner that are ready for billing. As incidents meet the determined criteria, a NEMSIS 3 XML file with attachments and PDF are exported to a secure FTP file location for R1 RCM processing. Elite delivers automated billing export summary reports to various recipients that can be used for reconciliation. Changes made to R1 RCM or ImageTrend are tested on a beta system before going to a live environment.

3.14.1.6 Requirement: The Proposer is required to provide an interface to the California All Incident Reporting System (CAIRS) that is acceptable to the State, and be able to comply with the State's requirements for submitting EMS data to NFIRS.

Elite is NFIRS and CAIRS compliant. ImageTrend is the NFIRS vendor for Cal-Fire today. The NFIRS and CAIRS rules are hardcoded into Elite. LAFD would have the ability to add, but not eliminate, NFIRS or CAIRS data standard requirements. ImageTrend tests all exports during the implementation process to make sure that the data is correct before going live with any solution. If changes are made to the NFIRS or CAIRS data requirement, ImageTrend would implement those changes accordingly in a timely manner to remain compliant.

3.14.1.7 Requirement: The Proposer is required to provide access to ePCR data, so that it can be used by the LAFD to create enterprise reports and dashboards, and perform data analytics using third-party tools, such as Microsoft's PowerBI.

Elite offers an external data mart. The data can be sent to a SQL database within the City's environment in near real-time. ImageTrend also provides a data dictionary that describes the fields and relationships within the external Data Mart. PowerBI can be run on the Data Mart for analytics and dashboards.

3.14.1.8 Requirement: The Proposer is required to provide an interface suitable for exchanging patient care information with receiving facilities. The Proposer is required to provide a means by which authorized users from receiving facilities can search, view and report on ePCR data that is associated with their facility.

Hospital Hub streamlines communication between EMS providers in the field and medical staff in the hospitals. Hospitals can prepare for incoming patients while EMS services receive outcome data. Hospital Hub can be set up to alert the hospital when EMS has entered a new patient that is being transported to their hospital. The alert will show a message on the screen in the hospital with a

snapshot of information from EMS, and can provide an audible alert. Hospital Hub can also be paired with ImageTrend Health Information Hub™ (HIH) to make easy and reliable data sharing between hospitals and an EMS agency possible.

Elite can be configured based on trigger events (such as record status, validation percentage, hospital destination, etc.) to send ePCR data to HIH, which transforms and delivers pre-hospital information into a hospital EMR acceptable format. This workflow works behind the scenes, delivering seamless data interoperability between healthcare organizations. Typical hospital integration scenarios consist of taking a NEMESIS XML file and converting it to an HL7 message type, which then is consumable by hospital EMR systems. The HL7 messages can contain both discrete data, as in a HL7 CCD file, or a PDF of the ePCR within a HL7 v2 MDM message. Hospital organizations and EMR vendors have different capabilities when receiving data from outside healthcare systems, so ImageTrend has built a solution that consists of a number of standard message types. For bi-directional data sharing from a hospital system for those patients that were delivered to that healthcare entity, ImageTrend accepts multiple HL7 messages back. This can be accomplished in a number of different ways. First is to look, or query for a patient's CCD (Continue of Care Document), or the hospital can trigger a HL7 A03 message when the patient is discharged from the hospital, or on a transfer trigger.

Going through a typical workflow scenario, when EMS hands off the patient at the hospital, a patient's MRN (and/or Encounter Number) is scanned into the ePCR record. The medic will post the ePCR to Elite web, Elite web will automatically look for the trigger rules, and if met, sends a NEMESIS file to HIH. HIH will receive the XML file, determine the hospital destination to send it to, transfer the data into the appropriate data file format and data transfer protocol, and send that ePCR information to the hospital EMR system. The hospital EMR system will receive that message, process it with looking at both the patient demographics and MRN/Encounter number, and automatically attaches the pre-hospital data to the patient medical record. Next, hospital personnel can access the pre-hospital information. Then, based on the triggers from the hospital, when either insurance information is entered for the patient, or the patient is discharged from the emergency department or hospital, a HL7 message is sent back to HIH, processed, and that data is integrated back into Elite and associated with that patient encounter. That hospital data is now available for crews, supervisors, and billing staff to view and report on. Additionally, ImageTrend has an auto-notification to crew members for specific patients they identify that they would like to follow-up on. This logic will automatically notify crew members that outcome data is available, which is identified through the Elite inbox. This takes that directly to the message where they can view a PDF of a side by side comparison of what they documented in the field as the patient's impressions, to what the hospital determined as final diagnosis. This uses the same configurable tools built into Elite, which allows you, as the system administrator, to define and configure what the PDF looks like. This gives the crew flexibility to be notified of those acute patients they are concerned about, instead of overloading with them notifications of every patient.

3.14.1.9 Requirement: The Proposer is required to provide an interface or other supported integration to the BD Pyxis MedStation BD Pyxis 4000

ImageTrend routinely works with various third-party vendors to enhance the customer experience through integration. ImageTrend is currently in conversations with BD Pyxis and has their design documentation. This integration would require a Statement of Work and development plan.

3.15 LEGACY DATA CONVERSION

3.15.1 Requirement: The Proposer is required to provide a mechanism for accessing and/or converting existing legacy data that contains vital historical information, and making that information available to ePCR users.

ImageTrend has successfully imported (and converted) historical data for many of our clients. For data that is stored/exported in a NEMSIS version 3 format (or similar), the data would be imported into the Elite site (and grouped by agency). For older data (similar to NEMSIS version 2 format), we typically import that data into a separate system/site. Permissions can still be applied to this data (per user), and it is reportable.

3.15.2 Requirement: The Proposer is also required to provide expert technical resources that can assist in the identification and analysis of existing information sources, and provide recommendations for its conversion and/or other means of access. The Proposer may also be required to provide the resources to implement the recommendation, depending on the solution.

All historical data imported by ImageTrend will allow you to: (1) apply user permissions to records (grouped by agency); (2) search for and view an individual ePCR (in a printable PDF format) and (3) report on data points.

SECTION 4: PROFESSIONAL SERVICES



4.1 KEY PERSONNEL AND PROJECT TEAM

4.1.1 Requirement: the Proposer is required to provide a team of qualified professionals with the required skills necessary to deliver the entire solution.

> Leadership Team Bios

Mike McBrady

President and Chief Executive Officer



Education: BFA, University of Minnesota

Background: Mike McBrady has been involved in the planning, architecture, and execution of software development for over twenty one years. He has successfully engineered projects for a variety of platforms that address issues from across the spectrum of business, both private and public. His unique blend of talent has enabled him to become a keynote speaker at events such as IBM's Global Supply Chain Management Conference and MAPICS International Convention.

"I'm inspired every day by the people I work with – our clients and ImageTrend community. It's rewarding to see patient outcomes improve due to our client's dedication to better data collection and analysis. The data can only tell the story with their commitment. We're honored to help tell that story."



Joe Graw

Chief Operating Officer

jgraw@imagetrend.com

Education: MBA, Hamline University; BS, St. Cloud State University

Background: Over the past 16 years, ImageTrend has been philosophically influenced by Joe Graw's leadership. From engineering the product, to working with clients to realize their goals, to now leading the organization, Graw believes in the ImageTrend community. Graw also works with the nation's EMS and Fire communities; evidence-based research and creating standardized metrics for operational efficiencies are some of the many initiatives Graw feels passionate about.

Graw listens to our clients' ideas and works to provide opportunities for ImageTrend to impact their communities.



Collin McBrady

Vice President of Information Technology, CTO

cmcbrady@imagetrend.com

Education: Bachelor of Science in Physics and Astrophysics, University of Minnesota

Background: Collin McBrady's strength of leadership in security and quality is shown in the products and services we offer and deliver. You might say it is in his blood. He is vigilant to his core when it comes to reliable and secure data services for ImageTrend and our clients.



Michael Patock

Vice President of Product Management

mpatock@imagetrend.com

Education: BS Computer Science, Minnesota State University, Mankato, MN

Background: Michael Patock's 20 years of experience here at ImageTrend positions him well to be the leader in product management at the company. From triaging product development, to interfacing with multiple development teams, Patock provides insightful direction to ImageTrend's solutions and where our products need to go next. Patock's big picture thinking unites product focus with innovation resulting in the better use of data to benefit clients while strengthening our connected solutions.



Dan Vanorny

Vice President of Software Engineering

dvanorny@imagetrend.com

Education: BA (Cum Laude), Gustavus Adolphus College in Computer Science

Certifications: Microsoft Certified Solution Developer (MCSD), Microsoft Certified Application Developer (MCAD), Microsoft Certified Product Specialist (MCPS),

Microsoft Certified Network Product Specialist (MCNPS)

Background: Dan Vanorny has over two decades of experience in the software world building web-based applications. In addition to having an MCSD certification, Vanorny's background includes a strong knowledge of Microsoft technologies (.NET, SQL, etc). As the Vice President of Software Engineering, he is currently leading and managing the Development and Quality Assurance Teams that are responsible for our line of pre-hospital data collection applications.

Vanorny's excitement for innovation and cutting-edge technology is highlighted by his blend of energy and leadership. Always seeking to improve our solutions, he elicits input to continuously refine the user experience. Merging the vision and reality in developing the new platform of Elite shows Vanorny's forward thinking and commitment to our clients.



Toby Ritt

Vice President of Sales

tritt@imagetrend.com

Education: BA, University of Minnesota; College of Liberal Arts

Background: Toby Ritt has been with ImageTrend for over twelve years and has led the sales organization as Vice President for the past two years. He has an extensive background in the sale of enterprise solutions and has worked on almost every product ImageTrend has ever produced. Ritt possesses a solid foundation for the intricacies of government funding, allocations and communication. As the customer's advocate, Ritt pays particular attention to not only the product understanding, but also to the product value and the needs of each individual customer.

"In my 12 years at ImageTrend, I've worked with almost every solution we offer. Regardless of solution or industry, I have noticed that one thing our clients have in common is the desire to utilize data to make

knowledge-based decisions that will make the world a better place. I'm proud to work for a company that strives every day to make this possible."



Janet Leean

Vice President of Marketing

jleeen@imagnetrend.com

Education: BS, University of Wisconsin – Eau Claire; University of Saint Thomas - Business School

Background: Janet Leean has been with ImageTrend for 5 years leading the Marketing Team. Throughout her career, Leean has exclusively worked with technology companies to bring the customer perspective to light. Her focus is in sharing the customer perspective while supporting the ImageTrend brand to provide resources to those in search of solutions to their challenges. Her particular interest in sharing our client stories and insights helps to spread their wealth of knowledge with other customers and prospects, strengthening industry connections.

"It's important to me to be a part of a company that works closely with clients, serves the greater good, and to work with people that are passionate about what they do. I'm proud to say ImageTrend delivers."



Dan Quam

Legal Counsel

Education: B.A., University of Wisconsin – Madison; J.D., William Mitchell College of Law

Background: Dan Quam draws on years of in-house and private practice experience to counsel ImageTrend on all legal and regulatory matters. His ability to balance business and legal objectives, has helped ImageTrend and numerous other highly-regulated industry participants successfully navigate capricious legal landscapes and foster strategic growth. Quam is inspired by the power of data, and works diligently to assist clients in driving positive, compliant change and measureable results.

4.1.2 Requirement: The Proposer is required to provide a full-time professional Project Manager to be the LAFD's single point of contact for the duration of the project. The Project Manager must have full authority to administer the contract for the project on behalf of the Proposer.



Anne Hulsether

Client Services Manager

ahulsether@imagnetrend.com

Phone: (952) 469-6175

Education: Psychology, University of Minnesota-Twin Cities, Minneapolis, MN

Background: Anne Hulsether worked for 10 years in hospitality as a Director of Catering and Food & Beverage Operations before coming to ImageTrend. Her strengths focus on project management, customer service, and communication. She started as an Application Support Specialist

with ImageTrend and has transitioned to implementations concentrating on Elite and the NEMSIS 3 initiative.

Module Areas of ImageTrend Expertise: EMS/Fire, ImageTrend Elite

Projects: Bedford County Dept. of Fire & Rescue, Lisbon-Mt Vernon EMS, Cross Timbers Ambulance Billing, City of Wray EMS



Rahul Singh

Project Specialist

Rsingh@imagetrend.com

Education: BS, UP Technical University, Greater Noida, India; MS, University of North Dakota, Grand Forks, ND; Project Management Professional (PMP-PMI), certification number 1744314

Background: Rahul Singh joined ImageTrend in 2009. Since being at the company, Singh has managed government-contracted projects on multiple systems throughout the entire implementation life cycle, including project initiation, stakeholder management, scheduling custom development, business analysis and consulting for optimal results. He has worked with clients to outline project scope, business, and technology requirements; set expectations and goals, due dates and acceptable deliverables, to ensure timely completion of projects; facilitate meetings with involved stakeholders and subject matter experts to determine requirements, discuss goals, and determine budgetary requirements; conduct scope validation, walkthroughs and, delivery of client submitted enhancement requests and defects; collaborate with technical architecture, release management, database administration and various cross-functional teams to ensure smooth delivery, also provide functional and technical consultation to business, QA and application support teams; create and develop user stories and delegate them to development teams. Manage multiple teams within different projects; development of pre-hospital care web based solution through Agile/scrum methodologies utilizing ColdFusion, MS-SQL, jQuery and Ajax.

In addition, Singh is recognized as a subject matter expert for reporting and analysis enterprise solution and API based integration with host application. He has expertise in implementing and building bi-directional or third party data integrations systems from scratch; delivering a wide range of functional enhancements and performance improvements to dozens of existing modules and reports within different applications making them flexible and scalable; mentored new developers on the team; identified, proposed and implemented process optimizations to maintain more transparency per version release; evaluated requirements and initial mock-ups; made technology recommendations that supported optimal build, maintenance and performance; collaborated with technical architecture, release management, database administration and various cross-functional teams to ensure smooth delivery, also provided functional and technical consultation to business, QA and application support teams.



Samantha Garske

Account Advisor

sgarske@imagetrend.com

Phone: (952) 469-6134

Education: BS, Business Administration, Metropolitan State University, MN

Background: Samantha Garske has nearly 15 years of customer service experience with a focus on building and maintaining client relationships. She started as an Application Support Specialist with ImageTrend and has transitioned to Account Advisor concentrating on the continuous development of client sites and data collection. She enjoys working closely with clients and finding solutions to client obstacles and needs.

Module Areas of ImageTrend Expertise: EMS/Fire, ImageTrend Elite

Projects: San Diego, New Jersey, Coastal Valley, Riverside



Robert Graham

Account Advisor

rgraham@imagetrend.com

Phone: (952) 469-6487

Education: BA – Business Administration, Metropolitan University

Background: Robert Graham has over 10 years of client service experience. He has been with ImageTrend for almost two years now. Starting as an Application Support Specialist, moving to Support Lead and currently Account Advisor. As an Advisor, he is the first point of contact for clients, their advocate for software enhancements/changes, working with clients so the software fits their needs including workflow and general technical troubleshooting on any issue. This also includes assistance with data reporting and best methods of pulling desired data out of a client's system.

Module Areas of ImageTrend Expertise: EMS/Fire, ImageTrend Elite

Projects: AMGH, State of Alaska, State of Kentucky, State of Nebraska, State of Utah, State of Virginia, State of Wisconsin, Minnesota State Fire Marshall, Houston (TX), MedStar, Tempe (AZ), Benton and Whatcom Counties (WA).



Gabe Shults

Account Advisor

gshult@imagetrend.com

Phone: (952) 469-6158

Education: Bachelor's Degree in Arts from Wichita State University

Background: Gabe Shults spent the past 10 years as a paramedic working in multiple facets of EMS in the State of Kansas. He has worked on the streets, as well as in administration, and education in an effort to share his passion for helping the community around him. Shults joined ImageTrend in 2019 as an Implementation Coordinator and is now an Account Advisor, he is excited to use his experience to help clients get the most out of our products.

Module Areas of ImageTrend Expertise: EMS/Fire, ImageTrend Elite

Projects: Milwaukee (WI), Farmington (NM), Kettering (OH), Rancho Adobe (CA), Petaluma (CA)



Liz Mettille

Applications Support Specialist II

emettille@imagetrend.com

Phone: (888) 730-3255

Education: BA in Criminal Justice & Sociology; Iowa State University, Ames, IA

Background: Liz Mettille worked for over 10 years in hospitality and customer service before diving into the software field. She has over six years of experience in a software support role. She has been with ImageTrend for a year and a half.



Kristine Wimmer

Client Services Specialist

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Phone: (888) 730-3255

Education: A.A.S in Business Marketing & Marketing Design; Dakota County Technical College, Rosemount, MN

Background: Kristine Wimmer has worked in the customer service and hospitality industry for over 10 years before moving into the software field. Wimmer started her career at ImageTrend in March of 2016 as an Application Support Specialist. She enjoys sharing her vast knowledge of ImageTrend products while building and maintaining client relationships. Most recently, she has transitioned into her new role as a Client Services Specialist working closely with the Support, Implementation and Education Teams.



Brent Ashland

Product Evangelist

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Phone: (952) 469-1589

Education: BA, Gustavus Adolphus College; MSE, University of Wisconsin – Superior

Background: Brent Ashland spent 27 years in public education, including 20 years as a High School Principal, prior to joining ImageTrend in 2017. Drawing upon his vast experience in education, he specializes in creating customized webinars and on-site training for Elite clients.



Rachael Renneisen

Product Evangelist

rrenneisen@imagetrend.com

Phone: (952) 469-1589

Education: MBA, Kansas Wesleyan University; MHA, Grantham University; BA, Kansas Wesleyan University

Background: Rachael Renneisen worked for 5 years in higher education as an Assistant Professor teaching business courses in an online environment before coming to ImageTrend. Her strengths focus on education, adult learners, and effective communication. Renneisen is a more recent employee of ImageTrend and has been spending time working in the Support Team before she transitions to the Education Team.



Eric Sawyer
Product Evangelist

esawyer@imagetrend.com

Phone: (952) 469-6215

Education: AS Degree Paramedicine South Central Technical College

Background: Eric Sawyer worked in EMS for 17 years; 13 of those years as a Paramedic and Dispatcher for Mayo Medical Transport out of Rochester, MN. He also worked on the Plainview Volunteer Ambulance for 16 years and implemented ImageTrend products after he became the Director in 2004. Sawyer started at ImageTrend in June 2007 as a Support/Training Specialist, and was promoted to a Support Manager in January 2010 and is now a Product Evangelist specializing in education and consultation for the product. Sawyer enjoys working with clients to assist them with their support and educational needs, and travels to educate and consult with clients on ImageTrend's EDS products.

Projects: Ventura County, Santa Barbara County, El Dorado County, San Diego County, Riverside County, Sac Metro Fire, Dallas Fire, Allina Transport, North Memorial Transport, Orange County (FL), Along with several state clients and DHS.



Carrie O'Connell
Implementation Coordinator

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Phone: (952) 469-6168

Education: BS – History, Iowa State University, Ames, IA

Background: Carrie O'Connell joined ImageTrend as an Implementation Coordinator in February 2018. Previously, O'Connell worked for a class action settlement administrator. O'Connell has six years of project management experience, helping clients meet their goals within the project timelines.

Projects - Elite: Fort Lauderdale (FL), Northwest Central Dispatch (IL), Kalamazoo (MI), Grand Rapids (MI), Appleton (WI), Avondale (AZ), Goodyear (AZ).



Andria Sommers
Implementation Coordinator

asommers@imagetrend.com

Phone: (952) 469-6165

Education: BA – International Relations, University of Minnesota, Minneapolis, MN

Module Areas of ImageTrend Expertise: EMS/Fire, ImageTrend Elite

Background: Andria Sommers joined the ImageTrend Implementation Team in January 2016. Sommers has over 19 years of experience in software implementation and project management including experience managing the development of software applications. Sommers leads implementations for states and large counties on ImageTrend Elite. Sommers enjoys collaborating with the client on their implementation and guiding the client and their project from inception to go live.

Projects: State of Tennessee, State of Nevada, State of New Hampshire, Marin County (CA), Grand Junction (CO), Unity Point Health EMS (IL), Virginia Beach (VA), Benton County (WA) and Suffolk County (NY).



Alex Canfield

Application Support Specialist II

acanfield@imagetrend.com

Phone: (952) 469-1589

Background: Alex has worked 10 years in customer service positions ranging from serving to management. He started working for ImageTrend in 2015 and was promoted to a Level II roughly a year and a half later. Right around the same time, he transitioned to the Escalation Team working closer with development and working in the SQL databases.

Module Areas of ImageTrend Expertise: ImageTrend Elite, EMS/Fire, Third Party Integrations, EKG

Projects: Houston Fire Department, Whatcom County Washington, State of Oregon, State of Minnesota.



Colleen Pompa

Project Specialist

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Phone: (952) 469-6163

Education: BS Computer Science, Minnesota State University, Mankato, MN

Background: Colleen Pompa has over 15 years of software development and systems analyst experience. Her former employment for these years was with Laura Baker Services Association and Thomson Reuters. She has been with ImageTrend for over 5 years working with the CAD Integrations Team as a Project Specialist and works with clients from project kick-off through go-live of the CAD Integration. Pompa enjoys working with clients, CAD vendors, and developers to successfully implement CAD integrations for ImageTrend products.

4.1.3 Requirement: The Proposer is required to provide the LAFD with clear written expectations for the resource commitments that the Proposer expects the LAFD to provide during system implementation. The Proposer is required to provide the LAFD with a project staffing plan that describes the type of resource, minimum qualifications, and estimated time commitment needed for each LAFD resource that is expected during implementation.

ImageTrend's Client Services team will go on site to LAFD to best determine how to meet and exceed your expectations around resource commitments. Whether your team is made up of one, or ten people, ImageTrend's implementation services are scalable, and are tailored to your unique requirements. The estimated time committed for LAFD's implementation will be determined by LAFD upon contracting.

4.2 PROJECT MANAGEMENT

Requirement: The Proposer is required to use a project management methodology that has been proven to result in a successful implementation of the proposed solution. The proposed project management methodology must provide adequate project controls for managing scope, schedule, budget and quality. At a minimum, the project management methodology must address the following

- ✓ Project governance, including roles and responsibilities of project participants, including LAFD team members; decision making; and escalation process;
- ✓ Scope management, including requirements scope, traceability and compliance;
- ✓ Cost management and control;
- ✓ Schedule management, including project schedule updated at least monthly;
- ✓ Communications management, including project status reporting and stakeholder communications;
- ✓ Quality management;
- ✓ Risks and issues management, including reporting and updating of risks and issues at least weekly;
- ✓ Work plan and schedule; and
- ✓ System implementation plan, including methodology that describes key phases (e.g., design, validation, test, etc.).

> Los Angeles Fire Department Implementation

ImageTrend is able to provide numerous approaches to implementation in order to achieve client success. We pride ourselves in our ability to tailor a unique implementation experience that continues well beyond go-live; we build upon the growing needs of LAFD as the organization matures within our software and their expectations of it. A tailored approach allows us to design an experience that not only meets the needs of the stakeholders during implementation but ensures appropriate ImageTrend resources are available for continuing education based on LAFD's needs. Upon award of contract, ImageTrend will provide an onsite assessment performed by a Client Success Team. The Client Success Team will consist of representatives from the Implementation, Education, Support and Account Advisor Teams, along with ImageTrend management to meet with organizational and departmental stakeholders to familiarize ourselves with your unique needs and expectations. This Team will then design an implementation/onboarding experience based on those needs, and any other special considerations. We have included examples and further documentation describing the options that can be included in this plan in future sections of our response.

> ImageTrend Standard Implementation

The goal of ImageTrend's implementation plan is to install the primary agency site for the client and assist in system configuration and understanding to promote ease of use, workflow and data entry. The following is an example of our standard implementation plan is:

- ✓ An initial conference call with the system administrator and any other applicable participants to establish ongoing communication, as well as project roles, timelines and deliverables. The team will meet via webinar weekly for 12-16 education sessions.
- ✓ A workbook provided by ImageTrend for the client to complete for importing data into the system. This includes destinations, staff, vehicles and station information.
- ✓ Time with ImageTrend staff to configure system-level settings to ensure run forms are efficient use for the crew. ImageTrend will complete system walkthroughs and share best practices with the client. The walk-throughs help system administrators become technically competent within Elite. ImageTrend will also complete website management training, which expands on system administrator configuration, resource development and maintenance such as dataset definition, form management, and business rules and logic. These trainings promote self-sufficiency in maintaining the system and change management.

Implementation includes, but is not limited to:

- ✓ Administrative functions
 - Site management
 - Product settings
 - NEMSIS, state and LEMSA data reporting compliance
 - Data exchange
 - Incident forms
 - Validation
 - Report Writer – User defined reporting and canned reports
 - Administrative Reports
 - Data Aggregation
 - Quality Assurance/Quality Improvement
 - Access Control
 - Dataset Manager
- ✓ Service level functionality
 - Staff setup
 - Continuing Education
 - Training/Activities
 - Inventory/Maintenance
 - Checklist
 - Workflow (including CQI)
 - Incident Entry
 - Elite Field (if applicable)
 - Service Resources
 - Vehicle
 - Stations
 - Zone/District
- ✓ Other integrations
 - CAD integration (if applicable)
 - Billing integration (if applicable)
 - Hospital Hub (if applicable)
 - Data Mart (if applicable)

- ✓ Training plan (administrative, train the trainer)
 - Training is designed based on client needs as defined in the contract
- ✓ Testing and quality assurance will occur throughout the implementation process

> Progress Checklist

ImageTrend utilizes an implementation schedule as seen below. The implementation schedule includes a progress checklist to provide an overview of milestones and assignment during implementation of Elite, Elite Field and associated modules. The checklist is a working, living document that is updated and shared in order to keep all parties informed of the rollout and any additional tasks that are required for completion. We work together at the onset of implementation to determine dates and additional tasks that may be necessary in the implementation process.

Week	Title	Owner
1	Elite EMS/CAD Kickoff	ImageTrend/Los Angeles
2	Site Build	ImageTrend
3	Provide/Complete/Return Import Workbooks	ImageTrend/Los Angeles
4	Provide/Complete/Return CAD Integration Workbook	ImageTrend/Los Angeles
5	Education Session 1 & Agency Build-out	ImageTrend/Los Angeles
6	Education Session 2 & Agency Build-out	ImageTrend/Los Angeles
7	Education Session 3 & Agency Build-out	ImageTrend/Los Angeles
8	Suggested Onsite Administrative Training (3 days)	ImageTrend/Los Angeles
9	Education Session 4 & Agency Build-out	ImageTrend/Los Angeles
10	Education Session 5 & Agency Build-out	ImageTrend/Los Angeles
11	Education Session 6 & Agency Build-out	ImageTrend/Los Angeles
12	Education Session 7 & Agency Build-out	ImageTrend/Los Angeles
13	Education Session 8 & Agency Build-out	ImageTrend/Los Angeles
14	Education Session 9 & Agency Build-out	ImageTrend/Los Angeles
15	Education Session 10 & Agency Build-out	ImageTrend/Los Angeles
16	Suggested Train the Trainer Training (3 days)	ImageTrend/Los Angeles
17	Education Session 11 & Agency Build-out	ImageTrend/Los Angeles
18	Education Session 12 & Agency Build-out	ImageTrend/Los Angeles
19	Education Session 13 & Agency Build-out	ImageTrend/Los Angeles
20	Education Session 14 & Agency Build-out	ImageTrend/Los Angeles
21	Education Session 15 & Agency Build-out	ImageTrend/Los Angeles
22	Suggested Onsite Administrative Training (3 days)	ImageTrend/Los Angeles
23	Education Session 16 & Agency Build-out	ImageTrend/Los Angeles
24	Go Live Week	ImageTrend/Los Angeles
25	Post Go Live Check-in 1	ImageTrend/Los Angeles
26	Post Go Live Check-in 2	ImageTrend/Los Angeles
27	Post Go Live Check-in 3	ImageTrend/Los Angeles
28	Suggested Onsite Audit/Post Go Live (2 days)	ImageTrend/Los Angeles

› Communication and Coordination

The overall success of the project requires our organizations to have a close working relationship. The project as detailed has various status checkpoints and scheduled meetings to ensure project performance.

The project begins with a kickoff meeting to establish project roles, provides your project team with an introduction to the key components of ImageTrend solutions, and to introduce best practices into all phases of the project. High-level planning is required to help establish system requirements and estimates of resource requirements and task durations. This can be achieved through the use of ImageTrend's implementation schedule and other project management tools. The following guidelines are base responsibilities for all project team members:

- ✓ Be a vital part of the project team that will carry the project through to completion
- ✓ Provide a single point of coordination to facilitate effective communication and escalation
- ✓ Ensure project deadlines are met and deliverables are provided as discussed

› Implementation Coordinators

ImageTrend's Implementation Coordinators are well versed in the need for an efficient and timely implementation. Our agile development environment is "hands-on"; utilizing project management tools (Kayako/Support Suite, Basecamp) for tracking, documentation and status reports in a supporting role.

› LAFD Roles

ImageTrend recommends LAFD assign a full-time project manager, or similar staff member, during the initial phase of the project. This person should participate in all meetings and help in the coordination of requirements gathering, stakeholder input coordination, ongoing project status reviews, acceptance testing and training logistics coordination.

› Quality Assurance

A quality plan is established at the onset of the project and followed through the entire development lifecycle and into implementation. This plan includes the quality goals for the project, including schedule variance, effort variance and post defect density. For off-site customer support services, these goals also include turnaround time, first time right solution, process compliance and effective communication.

› Risk Management

A risk management plan has been established based upon the National Institute of Standards and Technology "Risk Management Guide for Information Technology Systems". In this plan, the Software Development Life Cycle (SDLC) is separated into four sections for risk identification. These risks are then classified as high, medium or low. Further risk management evaluation can be included in the final project plan after contract, if desired.

Since this response involves a solution hosted at ImageTrend's secure data center, the risks are minimized and readily identifiable, which is not the case in a project requiring full development services. The following risks have been identified:

- ✓ **Availability of required stakeholders/resources.** With several stakeholders involved in both of our organizations, coordinating calendars and schedules to achieve objectives may be a challenge. It is important to identify known or potential team member departures and to be mindful of the possibility of changes. Holidays and scheduled time off may impact the availability of team members.
- ✓ **Business process reengineering.** As the implementation of the products occurs, the operational and technical entities will find efficiencies with the manner in which to operate the new system. These efficiencies may require changes in rule, local policies, or opinions about the efficacy of the reengineering.
- ✓ **Technical integrations.** Several of the deliverable tasks involve integrations or conversion of data from other existing systems. Each of these systems has data schemas, user interfaces and other nuances that are particular to their use. Identifying the necessary information and the means and directions by which to transmit this data requires collaboration and cooperation of several stakeholders.
- ✓ **Data security** must be clearly understood in its implications and who or what has the responsibility of compliancy. The hierarchical permissions generation provided in Elite provides the environment for controlling the access necessary to provide data protection.
- ✓ **Workflow definitions** present a risk in that the process must be clearly understood to ensure proper configuration and streamlining for efficiency. ImageTrend works closely with your project manager to ensure comprehensive understanding and a successful implementation. This is a low risk, since the necessary changes to the elements and/or configuration need to be merely identified and executed.
- ✓ **Cost** is identified as a low risk, since a fixed price contract with exact specifications for performance along with a product based solution, which is easily tested, provides a structure for exact cost estimates for funding.
- ✓ **Product performance** is a manageable risk through detailed specifications and selection of a product based solution, which can be demonstrated prior to selection and also prototyped for the exact application, increasing solution confidence significantly. Additionally, a system designed for scalability and hosting in a high volume data center will provide the necessary reliability.
- ✓ **Server failure** is a confinable risk with data backup procedures and system redundancies. A staging server is used for application updates and changes, so that they are tested prior to installation on the production server. ImageTrend's hosting environment also includes a backup server in a geographically stable environment.
- ✓ **Improper system access,** a high risk occurrence, is managed through an effective security plan, which details and offers effective enforcement options.
- ✓ **System updates** are a potential risk to system usage, but are containable as they are tested in a staged environment that is a complete copy of the production environment. Additionally, ImageTrend notifies you in advance of all scheduled updates.
- ✓ **Disk drive failure** is covered as a function of a server failure with appropriate backup and redundant servers and SAN storage units, but additionally the procedures dictate that the drive is physically destructed in order to ensure data privacy.

> Issue Tracking

You are able to route software issues through your Implementation Coordinator(s) during implementation. LAFD's project manager can submit a software issue via email to our ticketing system. Our ticketing system will create a support ticket from the email and the first available and most appropriate ImageTrend representatives will be notified of the ticket and can determine the best course of action.

It is the expectation that LAFD's project management team assists with the escalation and tracking of all reported software issues via Support Desk while the implementation is active.

> Ongoing Support/Support Desk

As detailed further below in our proposal response in Section 4.9, ImageTrend's Support Team is available Monday through Friday from 7:30 am to 6:00 pm CT via Support Desk, email or telephone.

The availability of the Support Team excludes nationally recognized holidays in the United States. Non-emergency support requests made after business hours are addressed the next business day.

Support tickets are entered into ImageTrend's Support Desk where our Team will review the item, route accordingly, and contact you with the resolution. An automated response to the support ticket will be received upon submission to include an assigned support ticket number, for tracking purposes.

When inquiring about the status of a task, log in to Support Desk where ticket statuses are available, contact Support directly referencing the ticket number and a representative may be able to provide more detailed information on the status or contact your project manager(s).

For items requiring more involved development, it is placed in our TFS (Microsoft Team Foundation Server), where it is reviewed and determined as a defect, product enhancement, or out of scope. Those items that are determined as a defect or product enhancement will be placed in an internal 'sprint' process. Internal scheduling meetings occur weekly to determine which items will be in the sprint and their priority. Sprints are pushed out to clients accordingly in our standard updates. You are alerted prior to the update and provided with release notes.

4.3 DETAILED STATEMENT OF WORK

Requirement: The Proposer is required to provide a detailed statement of work that is acceptable to the LAFD as part of the final evaluation period and prior to contract award.

> Statement of Work Creation Process

ImageTrend frequently creates Statements of Work (SOWs) for our customers to define custom software development, consulting, training, and implementation work that needs to be performed in support of our customers' business needs. The process to create a SOW varies somewhat depending on the customer's needs, but they follow a pattern of requirements gathering, deliverable definition, and then cost and schedule estimations. The creation of a custom software development SOW is the most complex, and thus below is an example of this. SOW creation for other types of work would follow a subset of this process.

> Custom Software Development SOW

The creation of a custom software development SOW starts with understanding your system and workflows. There are two parts to understanding the needs; one is understanding the business need - the why behind the request. The second part is understanding where the current functionality falls short of satisfying the why. This is the most critical step in the process as both sides need to agree on what the expectations are for fulfilling the business need.

When we understand how to satisfy the business need, then we document what the solution will be. This may involve developing draft screen layouts and logic flowcharts. As part of this documentation we may create draft "user stories", a standard method of communicating the requirements in the agile software development methodology. The user stories provide the details of what is expected of the code that will be developed. Included with the user stories, we may also, in conjunction with the customer, develop test cases that will be used to verify that the code was written correctly.

Once the requirements are fully understood, we then look to our Development Teams to provide an estimate on how long the work will take to complete. This estimate includes time to fully detail out the user stories, screen designs, and testing requirements. It also includes the estimated time to write the code, test the code and ultimately deploy the code to the system. In parallel to the actual coding of the solution, we also create documentation and train our Support Team as appropriate.

Then, the code is tested and deployed, we provide training to the customer as necessary and work with you to confirm that the solution fulfills the business needs.

4.4 SYSTEM SOFTWARE CHANGE CONTROL AND MANAGEMENT

4.4.1 Requirement: The Proposer is required to provide a change management and control process to address the need for changes that may be required to the proposed solution during system implementation.

ImageTrend follows an agile software development methodology. As part of this process, we recognize that requirements for change evolve as both the Development Team, and the business stakeholders, learn of the effects of the change, and develop approaches to fulfill the business requirements in the most efficient manner.

As with any software development, the start of the change process is to understand the high level requirements that the stakeholders are looking to fulfill. This high level view provides guidance as to the next steps; if the requirements are straightforward and understandable, the Development Team may move forward with little else. An example of this could be to change the help verbiage on a page. While this is a change, it can be quickly understood and should have little impact on the overall system.

Based on the high level requirements, changes that are more impactful will require more detailed requirements. Obtaining the detailed requirements involves a series of discussions with stakeholders, subject matter experts - from both LAFD and ImageTrend - and developers to identify areas of concern and to identify the complexity of each requirement. Stakeholders may be an individual customer, or it may be a number of users experiencing a problem represented by the ImageTrend Support Team.

Through identification of the complexity of each requirement, the Team can make decisions as to the return on the development investment. A complex, non-critical requirement that will take several weeks to develop, but will only save a few minutes a month in improved efficiencies and may be less important than a requirement that can be developed in a day but saves hundreds of hours on user time over a month.

Once the requirements are understood, the Development Team will put together technical specifications as to what it will take to implement the change. This involves understanding what components of the software will be affected by the change, and where risk areas of the development will be.

After the requirements are agreed upon, and the Development Team has created the technical specifications, the Development Team will estimate the development effort. This development estimate is used to both inform stakeholders and to schedule the work into a development "sprint" (a 2-3 week development cycle).

In parallel with the Development Team creating the specifications, the Quality Assurance Team will create the test cases for the proposed change. This process provides another view of the change and the impact that it could have on the system. In some instances, we will look to the customer to provide guidance as to how they expect to use the modified software, and what usages are driving them to request the change. If the change is being driven by a defect in the software, the Quality

Assurance Team will review support tickets, and work with Support to understand the circumstances that drove the support tickets.

Identified changes are prioritized into the development sprints based on a number of factors such as severity of a defect, the impact to users, the risk of the change and required regulatory changes. This prioritization is done through a process known as sprint planning.

Once the development begins, the expectation is that the Development Team will use a blend of the requirements, specifications and test cases to guide them in the development effort. During the development sprint, the Team holds daily “stand-ups” (brief meetings) to discuss progress, issues and potential areas of risk with the current development. A member of the Team is a “product owner” whose role is to provide a conduit between the business stakeholders and the Development Team. The product owner will help to guide the Team through questions and details that need clarity.

When development is completed, the changes are tested based on the test cases created in relation to the changes. This testing may involve unit testing, integration testing, system testing, performance testing, regression testing, etc. The testing team uses a blend of automated and manual testing processes to help ensure that the change both fulfills the requirements, and does not adversely affect the system.

Once a change is deemed complete and tested, we release the software in a planned manner to allow for further testing in “live” sites. This will initially involve releases to our demo environment and to customers who are experiencing a critical need to have the change implemented.

Your role in this process is to help guide us in understanding the need for the change and identify as many test scenarios as possible. This feedback helps to ensure that the end result is satisfactory.

4.4.2 Requirement: The Proposer is required to provide a change control process to ensure that changes are fully tested, documented and accepted before they are implemented into a production environment.

ImageTrend’s Quality Assurance Team is responsible for testing applications before they are released to production. The Team works closely with Development to identify expected test cases, fringe cases and potential side effects of code changes.

RELEASE PROCESS OVERVIEW

Every version for ImageTrend software follows a deployment process. The deployment process includes code changes, database updates and any configuration modifications:

1. Perform pre-release testing (see Manual Testing Workflow Overview and Automated Testing Workflow Overview sections, below).
2. Update a testing site, which resides in ImageTrend’s production hosting environment.
 - a. Run a final series of automated and manual regression tests.
 - b. If any blocking issues are found during final testing, evaluate postponing the release.
3. When no blocking issues are found, schedule the update. Each update will be released to clients in multiple rounds, with each round on a different day.

MANUAL TESTING WORKFLOW OVERVIEW

The following workflow is followed each time an update or fix will be released:

- ✓ At the beginning of each release, the QA Team reviews each item in the release and discusses testing strategies. The Team assigns an estimate for how long each item will take to test and assigns a tester for each item.
- ✓ The tester walks through the test cases for each item on an Alpha environment.
 - Any “side effect” or other functionality affected by the item is considered and also tested.
 - Any issues are documented and sent back to the developers if further work is needed.
- ✓ Once all items for the release are tested, QA begins testing the regressions suite for the product.
 - The regression suite consists of all major functionality deemed critical to the product.
 - The regression suite is always tested before release, even if there are no tasks related to those features. This ensures that vital features are working as expected before release.

AUTOMATED TESTING WORKFLOW OVERVIEW

Automated testing frequently helps to catch issues very early in the development lifecycle.

1. The Team identifies items to test through automated tests. (Common examples include saving and loading data, performance or moving data between two integrated applications.)
2. The QA Team creates automated tests by providing browsers with specific inputs and the expected results, allowing the browser to navigate the application without human intervention.
3. Schedule tests to run nightly on both alpha and production sites.
 - a. Results are reviewed daily. Any issues found are documented and sent back to the developers if further work is needed.

4.5 DOCUMENTATION

4.5.1 Requirement: The Proposer is required to provide all system administration and management documentation that is sufficient to properly operate and maintain the system.

ImageTrend offers ImageTrend Help / University in all of its products to provide administrators an in-depth tool for learning and using Elite. Content in Help / University is documented in the way in which clients use the software and access information. Help / University includes individual articles, guides, webinars and videos to get you started, trained on new features and to teach you skills. New features and updates are released on a monthly schedule in Elite and with corresponding documentation in Help / University. Email notifications and the Help / University landing page inform users of new releases. Additionally, quarterly summaries make it easier to digest all the new features in the past quarter. All documentation is written and maintained by an in-house Technical Writing Team.

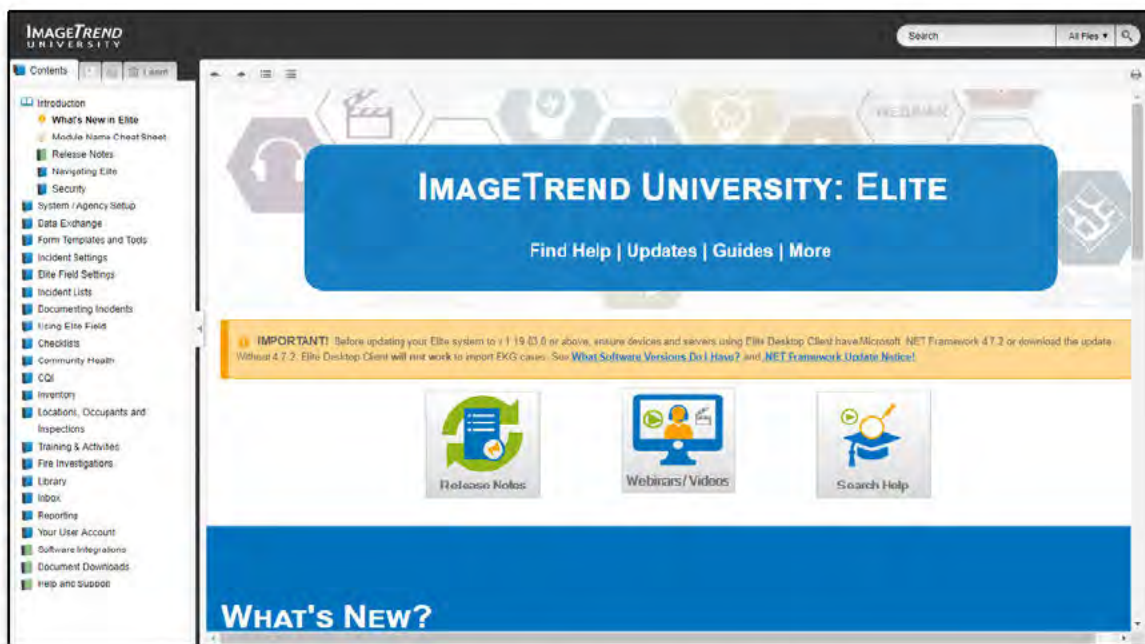


Figure 5: The Help / University landing page.

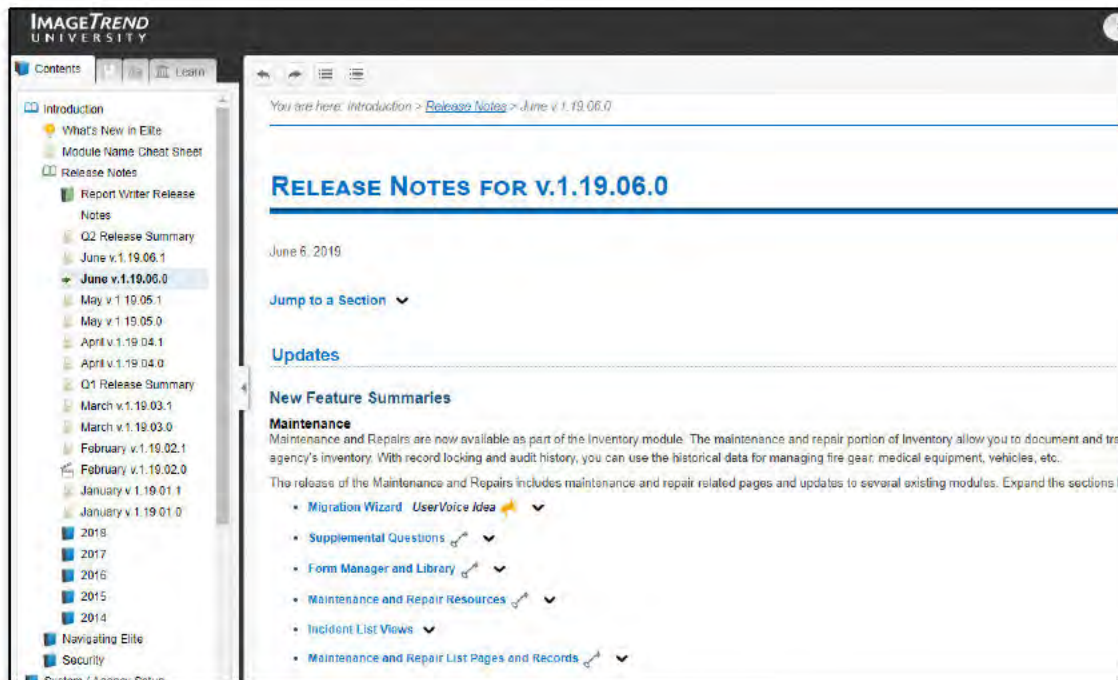


Figure 6: Release Notes for early June 2019.

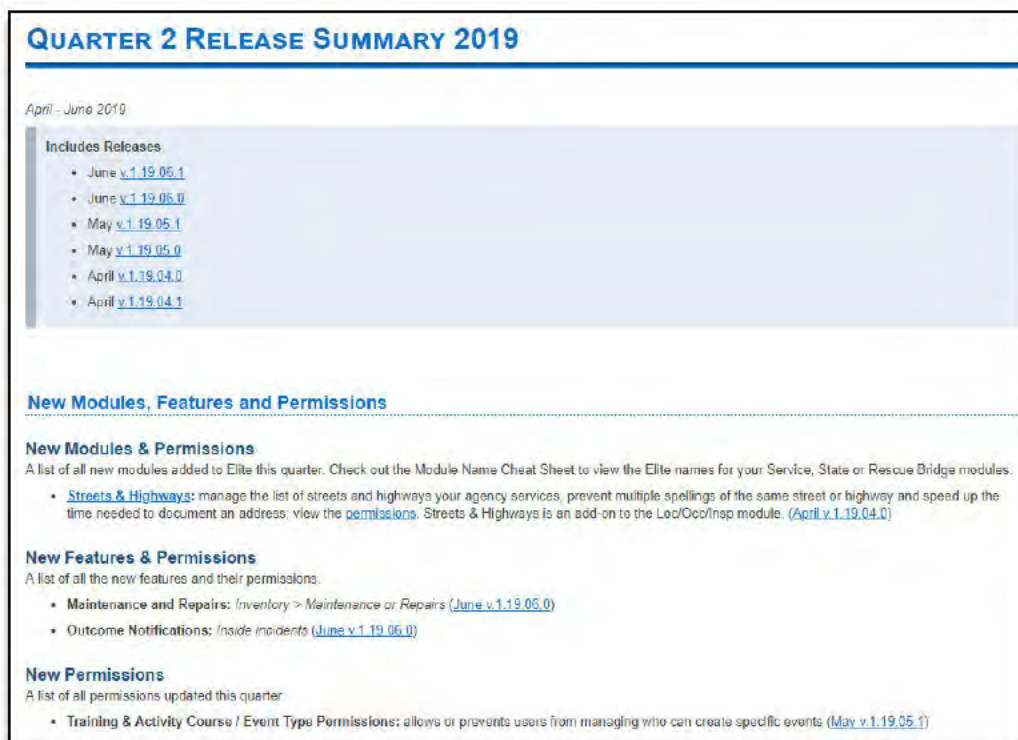


Figure 7: The summary of released features for Quarter 2 of 2019.

4.5.2 Requirement: The Proposer is required to provide data management documentation that is sufficient to properly maintain system data elements, and develop required interfaces and integrations to other systems.

Data elements and values are managed in Elite's Dataset Manager where documentation instructs users on working with data elements, labels, values, mapping and more. Help / University also includes integration documentation for various ImageTrend and third party vendors, such as CAD, billing, scheduling, HHH and Resource Bridge. All documentation is written and maintained by an in-house Technical Writing Team.

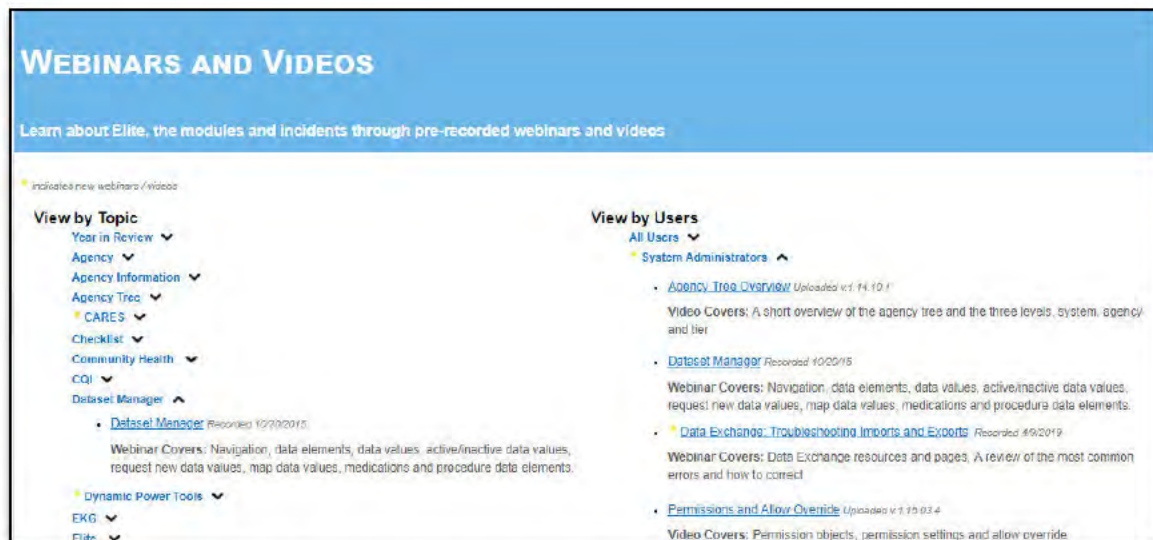


Figure 8: The webinars and videos for Elite and Dataset Manager.

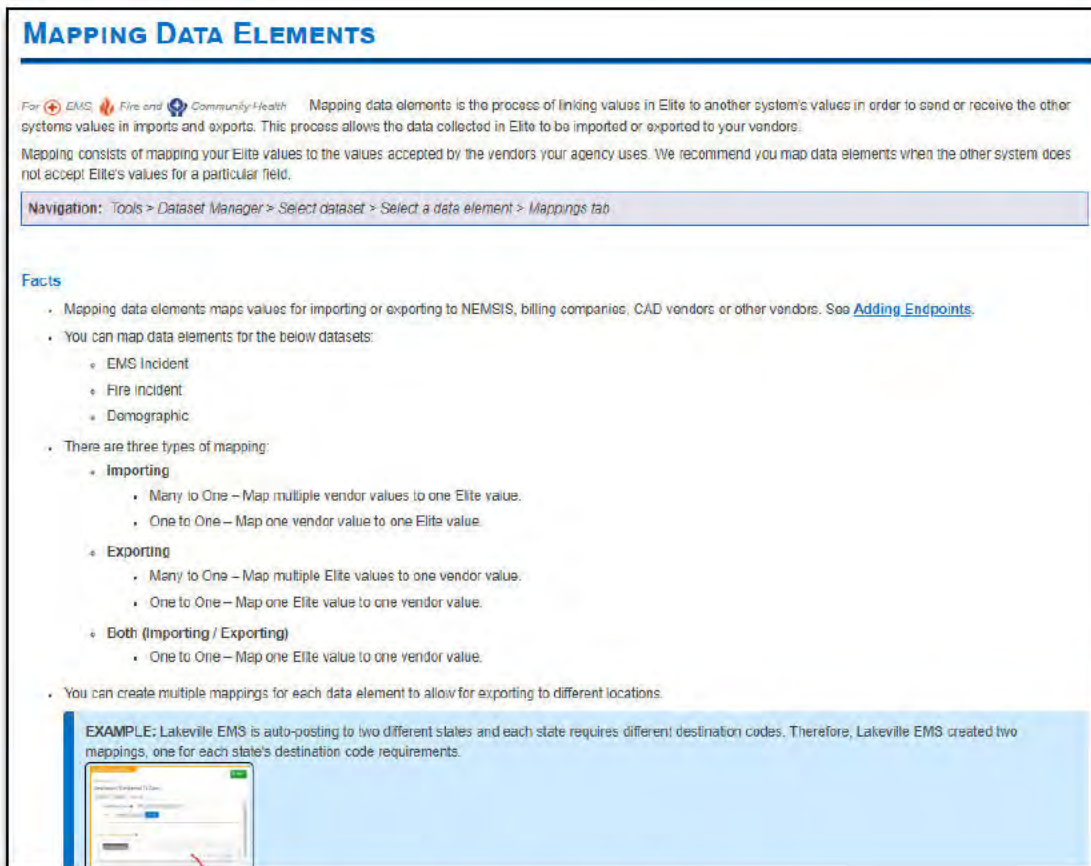


Figure 9: An article for mapping data elements

4.5.3 Requirement: The Proposer is required to provide end-user system documentation that is sufficient to properly describe system functions to an end user.

Elite is documented for all users, including end-users. Documentation specifically for end-users in Help / University includes individual articles, guides and videos for end-users to get trained and up-to-speed quickly. Topics include documenting incidents, navigation, messages, replying to and revising for CQI, and more. All users, based on permissions have access to Help / University. All documentation is written and maintained by our Technical Writing Team.

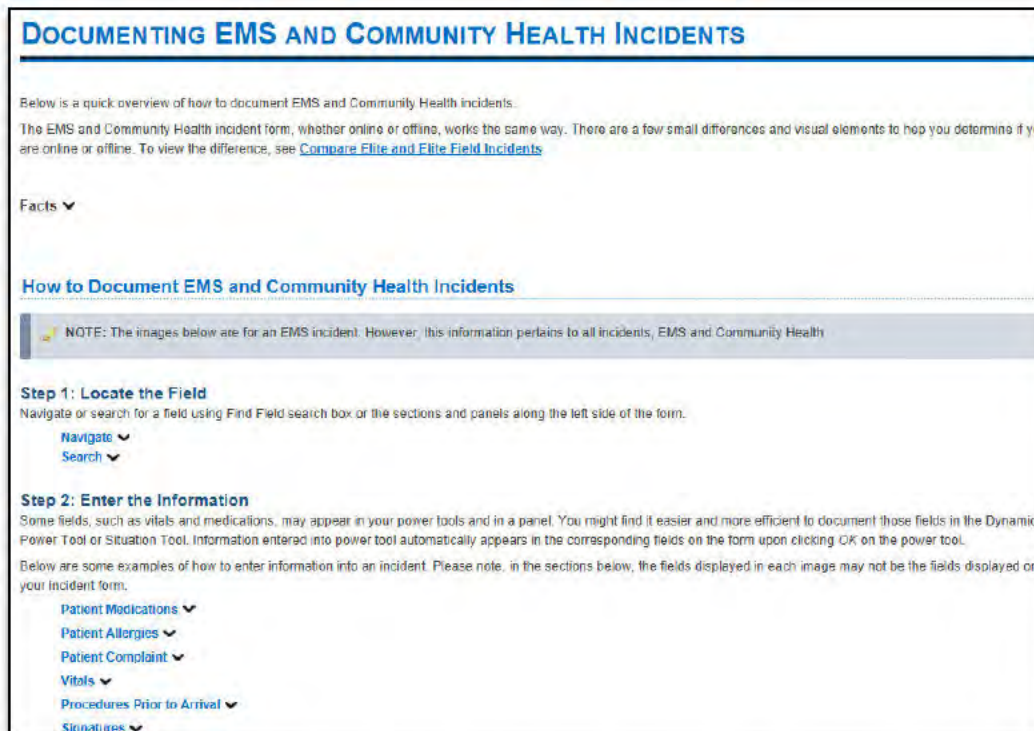


Figure 10: An example of an article for end users to learn how to document incidents.

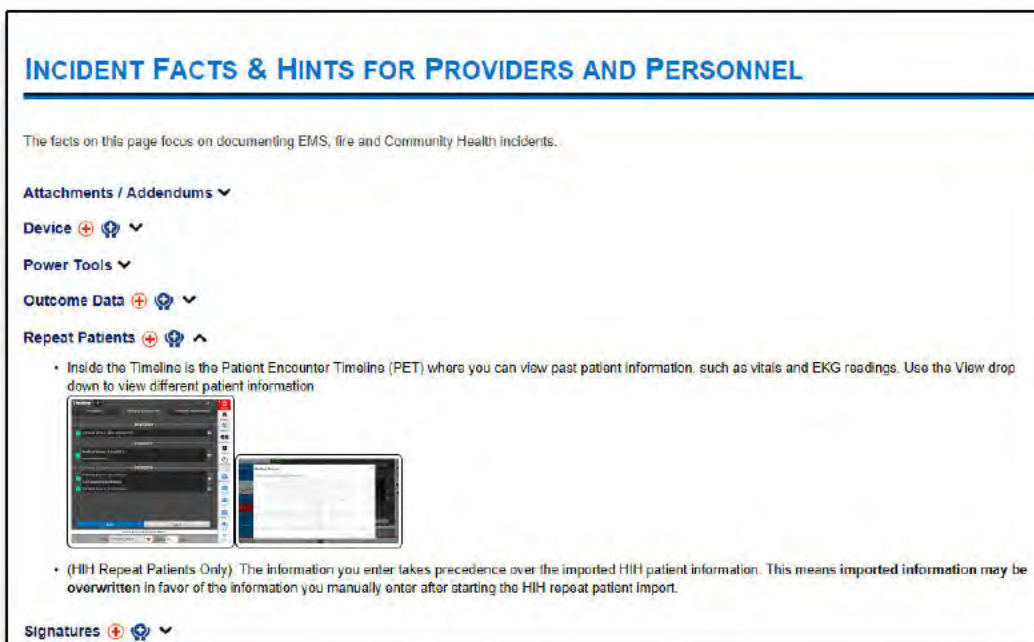


Figure 11: An example of helpful hints for end users.

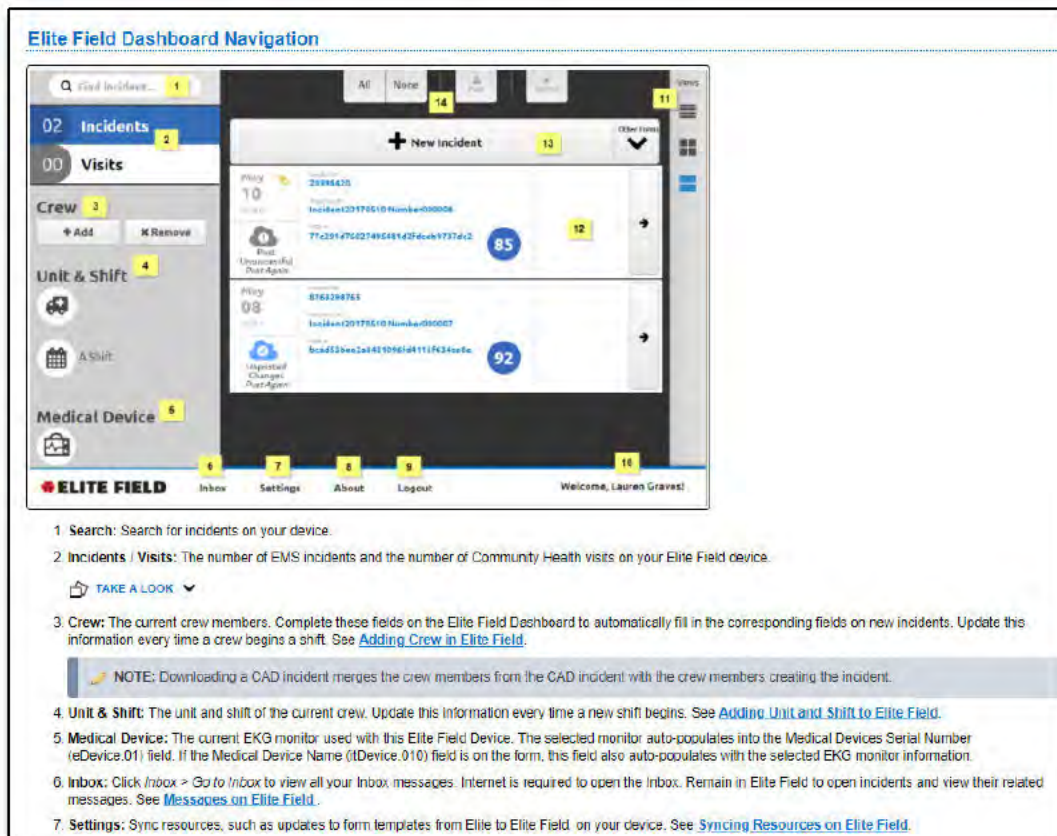


Figure 12: An example of a navigation article.

4.6 TRAINING

4.6.1 Requirement: The Proposer is required to train LAFD staff on all aspects of the system use and operation using experienced professional trainers and a proven training approach and curriculum.

4.6.2 Requirement: The Proposer is required to co-develop a training plan that utilizes LAFD staff to provide most of the training to end-users.

4.6.3 Requirement: The Proposer is required to provide training tools and/or system capabilities that reduce the need for formal classroom training and enhance the novice user experience and general user adoption. These may include, but are not limited to, in-system tutorials or user guides, online training, and manuals.

4.6.4 Requirement: The Proposer is required to provide a training plan that accounts for user refresher training and/or retraining that may be required due to anytime that may lapse between a user's initial training and the actual use of the system in production.

4.6.5 Requirement: The Proposer is required to provide a training plan that accounts for on-site, end-user support during cut-over or transition to a new functionality, which may occur at different times, depending on different operational areas.

4.6.6 Requirement: The Proposer is required to provide a training system that allows users to simulate live operations for all system functionality without interruption or degradation of the live/production system.

ImageTrend offers training courses for each product offering, as well as customized training for clients with specific learning needs. Our programs are designed to help site administrators and field personnel make the most of the system. The ImageTrend training curriculum will be reviewed with you and customized to ensure that all courses are designed to address LAFD's specific needs. Our response incorporates the "train-the-trainer" approach by ImageTrend personnel for cost savings; we can, however, deliver comprehensive training for all personnel. "Train-the-trainer" sessions will train a designated person(s) in all aspects of system administration and usage and provides the basic materials for the training plan for all field personnel.

ImageTrend is experienced in conducting training for clients requiring a large number of personnel to be trained and can work with you to establish a training plan to best meet your needs. Below is an example of a training plan used in recent implementations.

> Sample Training Plan

Administrative Review

Half day (3 - 4 hours)

This phase requires the client to prepare in advance of the session by completing workbooks and pre-training activities provided by ImageTrend. It is most effective when the client has a clear understanding of their internal processes.

Train-the-Trainer and/or End User Training

3 hours per class

This can be done over X number of days to train each shift or all crews. The schedule is established with the client to best meet shift needs.

Administrative Training

- ✓ Training and Activities (setup and user training): 2 hours
- ✓ QA/QI module (setup and training): 4 hours + 2 hours for end users
- ✓ Checklist: 1 hour
- ✓ High Level Overview of Report Writer (if desired prior to go-live): 1 hour
- ✓ Report Writer (post go-live): 2 hour webinar training

A walkthrough with the implementation team and use of the educational user guides are training tools for Agency, Staff, Destinations and other imported resources.

A typical 3-day training schedule is detailed below. Classes can be scheduled to meet when specific staff are available.

Day 1

0800-1200 Admin Review

1300-1600 End User Training Class

Day 2

0800-1100 End User Training

1100-1200 Checklist

1300-1500 CQI

1500-1700 Training/Activities

Day 3

0800-1200 End User Training

1200-1400 Report Writer Training

The remaining training time can be used for webinar training after go-live. As a helpful tip, Report Writer training is typically more valuable after the system is in use.

> Administrative Training



Administrative training focuses on system administration and all features associated with maintaining the application, including the knowledge to provide level 1 support and training to field personnel. Additional training will focus on data collection as well as reporting and data analysis. This training session can easily accommodate 10 – 15 people and can be accomplished within an 8-hour session. It is recommended that this training be accomplished in groups, since the interactive questions and assistance improves the learning process and establishes communication links for ongoing system usage. ImageTrend will hold this training at the location specified by you.

Free Training for Service Administrators

ImageTrend offers free hands-on training to service administrators for select products at the corporate office located in Lakeville, MN. This training is available on pre-determined dates set by ImageTrend. ImageTrend will train up to two administrators per service on setup, navigation and use of Elite EMS and Elite Field. Service administrators will also learn how to create ad hoc reports based on their data and how to maintain their user information. This training is offered periodically to services with a valid support agreement and is intended to educate service administrators to help them more effectively and independently use their application. With this inexpensive educational option, service administrators have the opportunity to improve education and understanding of the software.

> Train-the-Trainer Field User Training

Field training will educate users on the use of Elite Field to document patient care. The typical field training session takes about 4 – 8 hours and can be performed by anyone that has attended a “train-the-trainer” administrative session. The training program is reviewed and revised as necessary to incorporate the service’s specific requirements. ImageTrend is available for training or training guidance.



ImageTrend also provides webinar training, which has proven successful in delivering training in a cost-effective manner. Webinars allow staff to deliver training to personnel from their desktops without the need for travel.

> Ongoing Training

Ongoing training sessions can be held regularly for new personnel and as a review for existing personnel if desired and contracted. These sessions are conducted by the trainer onsite or via webinar.

> Documentation

ImageTrend will provide a training plan, a course outline, system documentation and user guides to assist in system comprehension. Course syllabi and scenario templates are prepared to enhance system understanding and are made available in a variety of formats for duplication. Other training materials provided include FAQs, education evaluation and an education review checklist. ImageTrend can also provide a certificate of education upon completion of the training course(s).

ImageTrend provides the most up-to-date documentation, including administrator and user manuals and release notes for any upgrades. With a support agreement in place, you will have access to educational videos, documentation, presentations and other documents in the ImageTrend University, which is accessed via your ImageTrend application. Documentation updates are ongoing and available at no cost.

ImageTrend University



ImageTrend University provides a library of resources to all clients with support agreements, including educational videos, manuals, quick guides and help documents for all ImageTrend products. The resources have been very useful as both refresher and initial education materials.

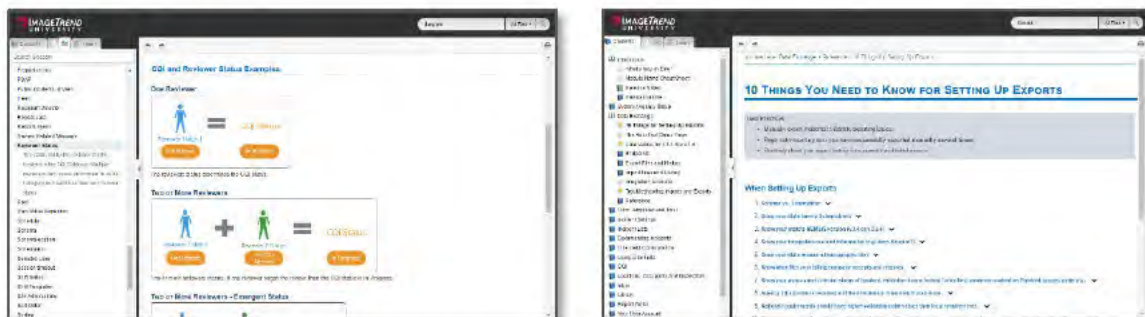


Figure 13. Examples of ImageTrend University.

4.7 SYSTEM USE AND LICENSING

4.7.1 Requirement: The Proposer is required to provide a licensing model that is predictable, understandable and easy to manage as user adoption increases over time.

ImageTrend offers a variety of licensing models to fit the needs of our clients. In this RFP, ImageTrend is offering our solutions as a SaaS (software as a service) model based on the incident count provided by LAFD. This model is intended for LAFD to be able to include an unlimited amount of users on their ePCR platform and ancillary solutions provided in this bid. The bid has incorporated SaaS pricing models for a number of modules with the cost being based on LAFD's total incident volume. As the number of incidents rises over time, ImageTrend has a tier based system to allow for incremental increases or decreases based upon your increased or decreased use of the platform.

4.7.2 Requirement: The Proposer is required to provide a licensing model that allows for incremental use and growth in the number of users and system capabilities over time.

ImageTrend is offering the LAFD a SaaS licensing model based on the expected number of annual incidents. This model includes usage of the platform for an unlimited number of users based on the LAFD's needs and mission. As annual incident volume may increase or decrease over time, ImageTrend addresses the topic of increased or decreased volumes with you at the onset of each budget cycle to assure that initial estimates are still valid and work with you to adjust the license model in accordance with your budgetary considerations.

4.8 WARRANTY

Requirement: The Proposer is required to fully warrant all provided software, hardware, and professional services for no less than twelve (12) months following the LAFD's Final System Acceptance. The Warranty period must include, but is not limited to, all required system hardware and application software support, software updates and bug fixes, enhancements, and all required professional services. The Proposer's warranty must conform to all agreed upon specifications, and protect against any defects or damage caused by the Proposer and/or its hardware, software or services, subcontractors or providers.

For a period of twelve (12) months following the LAFD's Final System Acceptance, ImageTrend warrants that all provided software, hardware (if applicable), and professional services will conform with ImageTrend's published RFP response representations. During the warranty period, ImageTrend will correct any defects or deficiencies caused by ImageTrend within twenty (20) days from receipt of written notification, at no cost to LAFD. ImageTrend shall have no warranty obligations with respect to any unauthorized non-ImageTrend amendment or changes to the software, which shall be subject to ImageTrend's sole discretion.

4.9 SUPPORT AND ONGOING MAINTENANCE

4.9.1 Requirement: The Proposer is required to provide a support model that provides the required level of support for a mission-critical system. At a minimum, the support agreement must include clear severity levels; guaranteed response times for each severity level; clear contact and escalation procedures; reporting requirements and procedures; and the role of the LAFD help desk.

> ImageTrend Support

ImageTrend provides support for its full product suite and hosting services. Support includes technical diagnosis and resolutions of technical issues involving software and server hardware. Technical support and service is provided in the areas of:

- ✓ Application hosting and support
- ✓ Application development/enhancement
- ✓ Database administration/support
- ✓ Project management
- ✓ Systems engineering/architecture

> Product Support

ImageTrend provides ongoing support as contracted after software implementation, including a focus on product performance and general maintenance. ImageTrend offers multi-level technical support, based on level-two user support by accommodating both the general inquiries of the administrators and those of the system users. Administrators have the ability to field support for the system as the first level of contact while also providing the option to refer inquiries directly to ImageTrend.

ImageTrend's Support Team is available Monday through Friday from 7:30 am to 6:00 pm CT via Support Desk, email, or telephone. Additionally, product support is available 24 hours a day, seven days a week, 365 days a year, through our electronic Support Desk. Users can log a support issue and self-triage their issue's severity. Critical issues will automatically notify the Support Team as well as the Executive Leadership Team via text message and email, 24/7.

ImageTrend offers an online support system, Support Desk, which incorporates around-the-clock incident reporting of all submitted tickets to ImageTrend's Support Team. Once a client submits a support ticket, he or she can easily track its progress with a secure login and stay updated on the ticket status. Ticket tracking and logs further enhance the efforts of support personnel by aiding identification of patterns that can be utilized for improvements in production, documentation, education and frequently asked questions to populate ImageTrend University.



Support Desk: <https://support.imagetrend.com/supportdesk/index.php?>
Email: support@imagetrend.com
Toll Free: 1-888-730-3255
Phone: (952) 469-1589

Enter your ticket details below. If you are reporting a problem, please remember to provide as much information that is relevant to the issue as possible.

General Information

Priority:

Ticket Specific Information EDS

Products:

(REQUIRED FIELD) Which EDS Product and Area is this regarding?

Service Name:
The name of the Service/Agency you are working with

State:
The State of the site you are accessing

Site URL:
The URL of the site you are accessing

Version: Report Writer/Field Bridge/MFI:
If applicable, enter the software version number

Web Browser:

Computer Operating System:

Message Details

Subject:

I am currently trying to build Validation Rule 105 requiring two sets of vitals when there was a patient transported but I can't get it to work. Can you please assist?

Figure 14. Example of Ticket Specific Information when creating a ticket through Kayako Support Suite Ticketing System:

> ImageTrend University

As mentioned in Section 4.6, ImageTrend University provides a library of resources including educational videos, manuals and help documents for all of our ImageTrend products. The system promotes swift resolution by offering keyword-based self-help services and articles in ImageTrend University, should clients wish to bypass traditional support services.

> ImageTrend Connect Annual User Conference

ImageTrend hosts an annual users conference in Minnesota where emergency personnel from across the country gather to share ideas and processes, examine key issues, celebrate successes and discuss challenges. Attendees are able to learn from those who know the industry and ImageTrend best - your peers and the ImageTrend team. Clients come from worldwide to connect with and learn from each

other, which is rated annually as one of the top reasons to attend ImageTrend Connect. Product developers and the Implementation and Support Teams are on-hand all three days of the conference.

As a staple in the ImageTrend community since 2009, ImageTrend Connect has quickly grown to be one of the leading conferences in the country focused on how to use electronic data collection, interoperability and reports to improve patient care.



> Recurring Conference Calls and Webinars

ImageTrend hosts conference calls and webinars on a bi-monthly basis for services. Also offered are monthly education webinars about ImageTrend solutions. During the meeting, ImageTrend shares information on product updates or enhancements, industry happenings and requests feedback. Suggestions for future discussion topics and networking among participants are also encouraged. Additionally, free educational webinars are offered monthly.

> ImageTrend Forum

The ImageTrend Forum provides a way for our client base to network together. The Forum, which is sponsored and moderated by ImageTrend, allows our clients to share their ideas, workflows and innovative solutions every day. Interfacing with other system administrators from around the world through live message boards, chat threads and polls are some of the ways users connect with each other.

> UserVoice

UserVoice is a community platform allowing system administrators to post feature requests or enhancement ideas. Users from throughout the country can vote and comment on these posts, getting various perspectives on ideas that may be especially beneficial. Each administrator receives a set amount of votes, so it is important to make those votes count. Each idea posted is carefully analyzed and may augment product roadmaps.

> Severity Level Definitions

ImageTrend Support Expected Response Times:

Severity Level	Examples of Severity	Notification of Acknowledgement by ImageTrend	Action Expectation: Update and anticipated error resolution plan after notification of acknowledgement by ImageTrend
Site Down / Critical	<ul style="list-style-type: none"> - Complete shutdown or partial shutdown of one or more critical software functions. - Access to one or more Software functions not available. - Major subset of software application impacted. 	Within one (1) hour of initial notification via email or ticketing system.	Six (6) hours
CAD Down / High	<ul style="list-style-type: none"> - Minor subsystem failure. - Data entry or access impaired on a limited basis – usually can be delegated to local client contact as a first level or response for resolution – usually user error (i.e. training). 	Within four (4) hours of initial notification during business hours via phone, email, or ticketing system.	Twenty-four (24) business hours
Medium / Low	<ul style="list-style-type: none"> - System operational with minor issues; suggested enhancements as mutually agreed upon. 	Within twenty-four (24) hours of initial notification during business hours.	Future Release

4.9.2 Requirement: The Proposer is required to provide as part of their support model full time access during normal business hours to a product manager and/or expert who has a very detailed understanding of the product and can provide the LAFD with advice and support regarding configuration and use of the system and its features.

ImageTrend Support is designed to be the initial point of contact for any and all LAFD support related needs regardless of the type or severity. One simple point of contact for all requests, takes the pressure off the LAFD organization to contact the appropriate person or group of people. LAFD has the comfort in knowing that submitting a ticket to support is appropriate for any ongoing or future needs. Our highly trained Support Team acts as the nexus for all communication coming into ImageTrend and are proficient in routing or assigning LAFD requests appropriately. At any point a support ticket can be routed to any department for resolution or to any member of management, product development or Executive Leadership should the organization's request warrant an escalated response. In addition to the ImageTrend Support Team, LAFD will be assigned an ImageTrend Account Advisor that will work closely with the organization. The Account Advisor is assigned to LAFD during implementation, and will remain with them throughout the life cycle of our relationship.

4.9.3 Requirement: The Proposer is required to provide a support model that includes a mechanism for planning for and controlling costs related to necessary future system enhancements, upgrades or changes that may be required due to changing operational conditions.

ImageTrend applications are designed with the user in mind all the way from the LAFD System Administrators down to end users. The LAFD System Administrators will have the ability to design, configure and implement most needed changes without the assistance of ImageTrend unless requested. Should the need for changes to the system require input or action by ImageTrend, LAFD will only need to submit a ticket to ImageTrend Support to receive assistance from the appropriate ImageTrend representative regardless of department.

SECTION 5: OPTIONAL APPENDICES



List of Attachments

1. Elite Product Description; supplements Sections 2, 3 and 7
2. LAFD Guiding Principles Supplement
3. Disaster Recovery Plan; supplements Sections 2, 3 and 7

PRODUCT DESCRIPTION

IMAGETREND ELITE EMS

Elite is a centralized, web-based system that offers pre-hospital emergency data collection, analysis and reporting in one enterprise solution. It supports the identification of evolving problems or successes in emergency health care while simultaneously providing secure access of that information to authorized personnel from anywhere, at any time. The information can be used to set priorities, make plans and ultimately assure safe and effective delivery of EMS to the public.

> Elite EMS Key Features

- ✓ A centralized, dynamic data warehouse with a scalable, open architecture for ever-changing and growing requirements
- ✓ Full NEMSIS v3 compliancy (for both “Collect Data” and “Send and Receive”); NFIRS also available
- ✓ Secure multi-tiered access to ensure and respect data privacy to HIPAA and other standards
- ✓ Agency administration from an enterprise level, allowing consistency within data entry and reporting
- ✓ Web-based online patient incident forms for data entry by all EMS providers
- ✓ Audit Validation to track and record access and changes to all ePCR records
- ✓ A robust internal messaging system to allow for easy and quick QA/QI processes
- ✓ The Report Writer which offers over 160 pre-created reports and easy to use ad hoc reporting with advanced query capabilities
- ✓ A Data Exchange module that can interface with many different formats (including NEMSIS v3, EKG, CAD, Billing, Telestaff, and others)
- ✓ Optional modules:
 - Health Information Hub™ (HIH) for connected healthcare data with hospitals for outcomes data in the ePCR, HIEs for patient lookup and other endpoints for patient-centric care
 - Web-based Hospital Hub™ for pre-arrival alerting to E.D. and secure, online viewing of incoming patients at the receiving facility
 - ImageTrend Continuum® for information delivered how and when you want it without building reports
 - Elite Field for field reporting, EKG wizard, and offline data entry capabilities
 - License Management for managing end-to-end licensing and records processing
 - Visual Informatics for advanced reporting with data mining techniques
 - Mapping and Reporting System (MARS) to allow plotting data on geographical maps and data analysis

› Elite EMS System Architecture

The overall architectural design of the Elite is comprised of a scalable database structure that supports full functionality with ease of expansion as requirements grow and change.

The Elite data repository is based upon the NEMSIS v3 uniform data set (NFIRS also available). In addition to collecting all aspects of NEMSIS v3 (including NOT values, Pertinent Negative values, ICD-10 codes, RxNorm values, GNIS addresses, and SnoMed codes), Elite is also capable of collecting custom elements.

› Data Repository

The data repository is Microsoft SQL based and designed to support the expanding and dynamic requirements of the EMS community. These requirements include, but are not limited to, system-wide quality improvements identified through tracking of trends and procedures, benchmarking of specific indicators for compliance and public health issues, and a non-redundant data flow and sharing between concerned agencies from the local to the agency to the national level. The NEMSIS v3 data set populates the database hosted at ImageTrend's secure facilities or at the client's hosting facilities. All fields of the data set are available for reporting and exchanging with other agencies and applications.

› Data Entry

Electronic data entry, whether via the Web or with the field clients supports ease of collection and ensures non-redundant entries, while being workflow oriented. The data can originate from CAD, Transfers, and medical devices, as well as quick-pick entries in the field (as it happens). This data collection constitutes the incident level and can be posted to the data repository. From here the data is available for querying, comparing, reporting or sharing.

› Security

The multi-tiered security module incorporated into this application meets HIPAA guidelines and has been reviewed by HIPAA officers of various organizations with a positive outcome. The reporting and auditing functions of the application's procedures allow for complete safeguarding and immediate notifications of any attempted breaches. This provides for data access only through assigned permissions and ensures that only those intended see their data and can access it for reporting.

› Scalability

ImageTrend systems are designed with open, scalable architectures and modular functionality. Modules can be added at any time, and if functionality is desired that does not exist, it can be designed as a module. All system additions are designed and tested on development servers to ensure desired functionality and full functional interfacing with existing functionality. This also provides the client with the ability to review and perform final acceptance prior to going live. The scalability lets the systems grow as needs, budgets and hardware capabilities allow, delivering continual progression.

Another consideration of scalability is the user and data volumes. ImageTrend systems are designed for high volume and traffic user bases, and there are many examples of each of these types of systems in use today.

This solution provides:

- ✓ Limited information access to the ambulance volunteer or paramedic in the field to their personal data and the ambulance incidents they perform.
- ✓ The ambulance agency manager has access to all of the data on all of the incidents that are handled by his or her agency.
- ✓ The city administrator has access to all of the incidents for his or her city.
- ✓ ImageTrend's familiarity with all sizes of EMS reporting systems is reflected in our diverse list of clients, ranging from agencies with fewer than 200 incidents per year to states with millions of incidents per year.

> Compliance with National EMS Database

ImageTrend is NEMSIS compliant – in both Collect Data and Send & Receive – and based upon the most current version of the NEMSIS data set, which is version 3. ImageTrend is committed to supporting the national data set. We understand the importance of a national data set and its positive impact on convenient data exchange and the potential role that EMS data plays in improving health care.

> Agency Administration

The agency administrator will have the ability to manage their agency through a series of setup screens and functions. Items such as Data Validation, Closed Call Rules, Dataset manipulation, and Form Builder are centrally administered which offers consistent, easy-to-use incident forms.

Agencies can set up their agency information, including contact information and customized resource lists. The custom defined resource lists allow an agency administrator to set up lists including:

- ✓ Facilities/Destinations
- ✓ Agency Locations
- ✓ Leave of Absence Reasons
- ✓ Vehicles
- ✓ Call Signs
- ✓ Zones & Districts

The user directory allows the agency administrators to set up crew members that will have access to the system or that will be available in the list boxes in the incident form allowing quick selections. This includes entering the certification numbers to expedite the data entry process.

> Validation

The Validation rules are set up by the agency administrator and are administered to the agencies and Elite Field users. The built-in data validation includes scoring to ensure data quality. Each field can have its own value towards the validity score. Items that require further information are highlighted in red and

the user is prompted at the middle-bottom of the form about the current validity score and the missing items that require attention. The validation runs “real-time” so that each time the user changes a value, the score is re-calculated and any appropriate fields are colored “red” to indicate they need to be filled out correctly. When a user clicks on the validation arrow it will automatically navigate the user to the specific field in question in order to complete or satisfy the validation error.

The screenshot displays a software interface for validation. On the left, a sidebar lists form sections: 'Rapid Entry Scene Data', 'Patient Assessment/ Complaint', 'Patient Assessment', 'Patient History', 'Patient Exam', 'Injury Mechanism', 'Vital Signs', 'Prognosis/Unit', 'CAD INFORMATION', 'Response Time', and 'On Scene'. The main area is titled 'Validation' and contains a table of rules:

Error Count	Validation Rule	Action
3	LAC: Complaint required when Run Type is Run (SQ Compliant) Complaint required with patient contact. (Error: 812)	→
2	LAC: Dispatch Date/Time 2 (SQ) required if Provider 2 (SQ) is documented. Dispatch Date/Time 2 required if Provider 2 is documented. (Error: 952)	→
17	LAC: Exams Grid required with patient contact Patient Exams/ Assessments Must Be Documented with Patient Contact (Error: 887)	→
4	LAC: Provider Impression required when Run Type is Regular Run. (eSituation.11) Provider Impression required when Run Type is Regular Run. (Error: 813)	→
0	LAC: Scene GPS Location is required (eScene.11) Scene GPS Location is required. Use SET SCENE GPS LOCATION button if it is NOT populated from CAD. (Error: 953)	→
1	Level of Care of This Unit (eResponse.15)	→

At the bottom of the interface, it shows 'No Patient Name Entered', a validation score of '43', and a 'Status: Draft' dropdown menu.

Figure 15. Above are some specific LA DHS compliant validation rules with quick links to make corrections on the form.

› Closed Call Rules

System Administrators have the ability to create closed call requirements per individual validation rule. This will restrict providers from posting an incident from the Elite Field to the central Elite system until the provider satisfies those rule(s).

› Dynamic Power Tools

Dynamic Power Tools allow users to group any grid from Medications, Procedures, Vitals, EKG and Assessments to provide documentation for common situations. These dynamic power tools can be named/labeled whatever the administrator would like. The layout of the fields is also completely customizable.

Figure 16. A specific example of a LA County general ALS protocol built using Elite's Dynamic Power Tool, a rapid patient activity documentation tool.

> Form Manager

The Form Manager is used to configure the incident form's layout. The Form Manager allows the incident forms to be configured to the exact needs and specifications of the individual agency. Sections, panels or fields can be moved, added or deleted, creating an incident form to meet the needs of each agency for data reporting. Other configurations include the ability to change labels, designate labels as read-only, inactivate fields, and group fields within a section. There are several other configurations to allow for quicker and easier data entry. Multiple incident templates can be created for different situations - for example, a form for cardiac arrest calls and another for cancelled calls. In addition, default values can be added into most of the fields. Default values are based on template type -- so a Cancelled call may have different defaults than a Scheduled Transport.

The screenshot shows the ELITE System Administration interface. At the top, there's a navigation bar with 'System Administration', 'Incidents', 'Resources', 'Tools', and 'Community'. The main area is titled 'LA EMS Form' and has tabs for 'Form', 'Times', 'Mileage', and 'Worksheets'. A 'Find Field...' search bar is located above a table of sections and panels. The 'Form' tab is active, showing a list of sections and panels. The 'Dataset' panel on the right lists various fields like 'Indications for Invasive Airway', 'Airway Complications', etc. The 'Form Field Properties' panel at the bottom shows details for the 'Run Disposition' field, including its status and default value.

Figure 17. The incident Form Manager allows the administrator to configure sections, panels and field locations on a form or worksheet.

> User Management

The Users section of each agency allows an agency or system administrator to track and enter many details about the agency and its staff, including:

- ✓ User Listing with Permissions
- ✓ Individual Staff Profile
- ✓ Add Staff
- ✓ Certification Management
- ✓ Employment Details (personnel ID, start date, title, etc.)
- ✓ Immunization Records

> Incident List

The EMS incident list allows the user to search for incidents by incident number, response number, date, time, validity score, and a variety of other fields. The quick access buttons to view audit history, create or view incident related messages, add or view attachments or addendums, and the ability to print or generate the PDF of an incident in a single click are available for each incident row. System and individual level views are customizable and can be tailored to meet operational, clinical and billing needs of LAFD.

EMS Incident List

Starts With Search All Columns Go

View: Medications and Procedures by Edit View All Refresh: Never Refresh

Unit Notified by Dispatch Date/Time: Patient Disposition: Patient Last Name: Go Reset Filters

Between 07/06/2019 to 08/07/2019 Equal All Starts With

+ New Bulk Actions Select All Records (88) Results Per Page 25 1 - 25 of 88

Order By: Patient Disposition Descending

Validity 84	Incident Number 776994	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/4/2019 17:47:38	Complaint Reported by Dispatch Traffic/Transportation Incident/Crash	Primary Impression Constipation	Medication Given Adenosine	
Validity 84	Incident Number 776533	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/4/2019 06:46:55	Complaint Reported by Dispatch Diabetic Problem	Primary Impression Injury of nose	Medication Given Epinephrine	
Validity 84	Incident Number 776532	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/4/2019 06:47:32	Complaint Reported by Dispatch Back Pain (Non-Traumatic)	Primary Impression Hypertension	Medication Given Naloxone	
Validity 84	Incident Number 776301	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/4/2019 01:17:41	Complaint Reported by Dispatch No Other Appropriate Choice	Primary Impression Respiratory disorder, unspecified	Medication Given Epinephrine	
Validity 84	Incident Number 776070	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/3/2019 19:46:14	Complaint Reported by Dispatch Drowning/Diving/SCUBA Accident	Primary Impression Injury of face	Medication Given Dopamine	
Validity 84	Incident Number 775839	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/3/2019 14:16:50	Complaint Reported by Dispatch Cardiac Arrest/Death	Primary Impression Uterine or vaginal bleeding, abnormal	Medication Given Epinephrine	
Validity 84	Incident Number 775608	Patient Disposition Treated / Transported	Unit Notified by Dispatch Date/Time 8/3/2019 08:49:58	Complaint Reported by Dispatch Back Pain (Non-Traumatic)	Primary Impression Meningitis	Medication Given Atropine	

Figure 18. A view of a dynamic Incident List.

> Elite EMS Data Entry

As a web-based application, data is entered via an online form that can be accessed from any internet connection at any time. This form replicates a paper patient care report (PCR) with all fields for data collection. Many features for simplifying data entry are standard including:

- ✓ Quick-pick lists
- ✓ Default Values
- ✓ Dynamic Power Tools™
- ✓ Situation Tools™
- ✓ Billing Information
- ✓ EKG Integration
- ✓ Validation Rules
- ✓ Electronic Signatures
- ✓ Repeat Patients
- ✓ Response Times

Figure 19. The Assessments Power Tool.

The screenshot shows the 'Vital Signs' section of the 'Vital Signs Power Tool'. At the top, there are buttons for 'OK', 'Cancel', 'Delete', and 'Repeat Last'. Below this, the 'Vital Signs' section is divided into several rows:

- Obtained Prior to this Unit's EMS Care:** A dropdown menu with 'No' and 'Yes' options.
- Blood Pressure Control:** Fields for systolic (140) and diastolic (70) pressure, and a pulse (P) field. Below these are buttons for 'Cuff-Automated', 'Cuff-Manual Auscultated', and 'Cuff-Manual Palpated Only'. A search bar for 'Method of Blood Pressure Measurement' is also present.
- Heart Rate:** A field for heart rate (78) and a 'Pulse Rhythm' dropdown menu with options: 'Regular', 'Regularly Irregular', and 'Irregularly Irregular'. A search bar for 'Pulse Rhythm' is also present.
- Respiratory Rate:** A field for respiratory rate (18) and a 'Respiratory Effort' dropdown menu with options: 'Normal', 'Labored', 'Rapid', 'Shallow', 'Weak/Agonal', 'Apneic', and 'Mechanically Assisted (BVM, CPAP, etc.)'. A search bar for 'Respiratory Effort' is also present.
- Pulse Oximetry:** A field for pulse oximetry (98) and a 'Pulse Oximetry Qualifier' dropdown menu with options: 'At Room Air', 'Low Concentration O2 (1-6 LPM)', 'Medium Concentration O2 (7-9 LPM)', 'High Concentration O2 (10-25 LPM)', 'O2', and 'CPAP'. A search bar for 'Pulse Oximetry Qualifier' is also present.
- End Tidal Carbon Dioxide (ETCO2):** A field for ETCO2 (38).

The right side of the interface shows a sidebar with various icons for navigation, including 'Vital Signs', 'Medication', 'MRN', 'Forms', 'Stroke Sca', 'Stroke Sca', 'Airway Pkg', 'BG Test', 'BCL', and 'All'.

Figure 20. Configurable Power Tool for rapid patient assessment data entry.

> Audit Validation

There are several levels of auditing within Elite. The auditing feature not only tracks and records every access and change to an ePCR field, it ties into the Data Validation engine which audits each data field to assigned business rules and produces a validation score of completion. All data transfers include validation algorithms to ensure successful data transfer. Additionally our hosting infrastructure includes several automated monitoring and auditing features to ensure security and quality assurance.

The Elite EMS system also tracks each time a user access an ePCR, prints an ePCR report, or changes a data value within an incident.

> Quality Management and Inbox

The QA mechanisms in Elite go beyond validity, and allow agencies and Medical Directors to track, review and comment on all incidents within their agency. To start, the system contains numerous standard QA reports that allow agencies to review and quickly determine the quality of incident being entered by their emergency technicians. Additionally, each incident can be assigned a status. This list is dynamic, and can be added to or modified at any time. This may include statuses for: In Progress, Completed, Submitted for Review, Needs Review, Reviewed/Sign Off, Billed, etc. Users and billing companies can search and report on status of all incidents.

If an incident is determined to need follow-ups with emergency personnel, the medical director or other agency administrators can record a note with a link to the incident. They can identify to which specific individuals to send the note. Users are automatically notified upon entering the system that they have unread notes. These correspondences are tracked within the system with no limits on the number of notes attached to the incident, for ease of review by the administrator or the Medical Director. Users with unread notes can reply to these just like email.

All internal notes/messages can be accessed by clicking the “Inbox” after the user is logged into Elite. From within Inbox, you can see your unread messages, read messages, sent messages, and messages flagged with a color-coded category. The user can delete messages, reply to an existing message, or create a new message.

Incidents can be locked from editing to maintain the integrity of incidents that have been submitted or billed. Administrators have the ability to lock or unlock incidents at any time. This can also be set on a schedule. For example, auto-lock incidents upon posting from Elite Field.

› Report Writer

Report Writer allows users to dynamically create, display, and store pre-created as well as ad hoc reports. With over 160 pre-created reports and the ability to create ad hoc reports as needed, the Report Writer offers expanded reporting and data analysis capabilities. Reports can be scheduled on regular intervals and supports distribution via email to a pre-determined list of recipients.

› Data Conversion and Integrations

ImageTrend’s goal in any solution is to streamline data flow and maximize data usage. The NEMSIS XML version 3 standard data exchange methodology has been successfully implemented in numerous solutions and with many different vendors. To accomplish this we have a team that thoroughly investigates the existing data and requirements and develops a plan of integration for ongoing data communications between systems or a data conversion plan for those instances when a singular import of existing data into the new database is required. In either of these instances, the file import method, file data type, and accurate mapping are the keys to success.

These interfaces will be fully reviewed for implementation requirements, after which a detailed implementation and acceptance will be presented. Even in the case of standard interfaces, ImageTrend reserves the right to fully review all requirements, as it has been our experience that even standard products from vendors often have variances that may not be thoroughly documented.

Every client has a unique set of interfaces that define their system and configuration; therefore, not all interfaces may be available for their specific versions. Even if we do not have a specific integration available, as integration experts we fully understand the issues involved and will prepare a detailed plan for successful implementation within reasonable timelines.

› Cardiac Monitor Integration

ImageTrend currently integrates with ZOLL, Physio, and Philips cardiac EKG monitors and AEDs. The data types that ImageTrend Elite Field currently captures are based on what the manufacturer exports. These include: 12-Lead Analysis, Defibrillation, ETCO2, Heart rate, Invasive blood pressure, Noninvasive blood pressure, Respiratory rate, and SPO2. Each entry is imported and saved as a new entry within the Vitals/Treatments section of the Elite EMS incident, which also appears on the printed report. In addition, the original manufacturer file is dynamically saved as an attachment in the specific incident. This allows the end-user to be able to view six-second waveform strips, as well as related waveforms for each vitals record at any time in the future. This data – when collected within Elite Field – can also be posted up to the Elite EMS data repository.

› CAD Integration

- ✓ Dispatches are usually text files that contain full or partial incident information
- ✓ ImageTrend has successfully built an import method for most of the existing CAD vendors
- ✓ CAD data is imported into an ImageTrend database, where it resides and can be downloaded into an Elite incident
- ✓ CAD/Incident reconciliation reports come standard with this integration
- ✓ All CAD data that has been imported into the Elite system is viewable from within the Incidents app menu item

› Billing

ImageTrend's software fully supports integration with all billing systems that are ready to accept NEMSIS v3 data. In addition, ImageTrend offers the capability to send data to secure FTP locations.

› NFIRS Integrations

ImageTrend's systems provide an NFIRS file export of available data for systems to use as a data import. If integration services are required, these are available at time and materials rates and will be offered as a change order scope of work after full discovery as described above.