



# TransLumen Technologies, LLC

## Business Capability Statement

### COMPANY OVERVIEW

TransLumen is a technology company that provides advanced visualization tools for better situational awareness to improve actionable decisions for "Big Data", testing/improving observational capabilities through simulation and to develop training through gamification. Government and large company integrators engage TransLumen for its unique human factors, UX expertise and advanced methodologies and patented technology that have a rapid commercialization path.

### CORE COMPETENCIES

#### Developer of next generation alarms and alerts solutions for "Data Visualization" applied to today's needs

TransLumen uses its proprietary and patented designs and techniques to advance computer graphical user interfaces. This is accomplished by **aggregation, navigation and display** of information to provide more actionable interfaces improving the user's ability to recognize real-time anomalies. TransLumen can aggregate multivariate factors then navigate and display information in a highly usable form (through TransLumen's patented Subthreshold Extreme Gradual Change (STEGC) visual processing) and creating a persistent data drill-down in real-time with its v-INDICATOR™. TransLumen's technology and approaches include such benefits as:

- ⊕ Reduces screen clutter and visual noise
- ⊕ Advances prioritization through filtering
- ⊕ Provides visual predictive capability
- ⊕ Scalable and mobile
- ⊕ Identifies worst case anomalies
- ⊕ Improves visualization to handle actionable multi-tasks
- ⊕ Monitor's over time without intrusiveness unless thresholds are crossed
- ⊕ Filters and identifies correct actionable tasks at the right time even under stress and critical situations
- ⊕ Balances the operator's workload by displaying simplified aggregated multivariate information

#### Observational Training for Operations, Security and Safety

STEGC algorithms are applied to images and video to create advanced observational skills training for operational personnel to recognize subtle cues, hazards and physical threats in complex environments and enhance perceptual skills for operators at command centers, field personnel in emergency response, and for security teams involved with physical security around assets.

- ⊕ Helps trainees recognize both subtle and blatant cues in complex environments
- ⊕ Develops testing to identify individual observational abilities or deficiencies using the patented STEGC
- ⊕ Reduces the time needed to differentiate between threat or non-threat conditions and response time

#### Mobile Distributed Gamification for Training and App Development

TransLumen creates distributed training tools that augment the training environment. The combination of video, instructional text, augmented reality, VR and STEGC imagery interact, enhancing the learning process. Gamification developed with TransLumen's expertise leverages classroom materials and better prepares the user for high fidelity simulators and operational environments. In addition, early stage learning interactive tools are easy to use, easy to repeat and easy to learn. Distributed training through gamification can be developed rapidly, is more affordable to maintain and operate, and is highly configurable and adaptable. The apps can be updated quickly as feedback indicates a need for additional problem solving.

- ⊕ Increases voluntary training hours to promote off-hours play/study during and between scheduled classes
- ⊕ Provides refresh classes for those already in place
- ⊕ Offers the user a new experience through gamification that is motivating, engaging, and stimulating, enhancing learning and providing immediate feedback on performance.
- ⊕ Reduces training costs therefore providing a higher ROI

### DYNAMIC COMMUNICATION WEB TOOL

- ⊕ TransLumen creates dynamic reporting structures to rapidly disseminate communication to multiple diversified recipients from a multitude of data such as mapping, crew reports, OEMC, Police and social media. Our products include interfaces that can identify and triage data and then help present the pertinent data in an easy to comprehend manner to all levels of impacted organizations and the general public. Information filtering based upon access enables secure automated report generation.

## TRANSLUMEN DIFFERENTIATORS

- ⊕ Possesses proprietary and patented algorithms, designs and techniques to advance graphical user interfaces
- ⊕ Pioneers in visualization technologies and mobile app development
- ⊕ TransLumen’s management team has over 40 years each of experience in such key disciplines as technical innovation, graphic software programming including 3D games, photography, cartographic mapping, database construction, project management
- ⊕ TransLumen’s technology has been tested by R&D organizations with successful results

## APPLICATIONS EXAMPLES

Some examples of applications for companies using TransLumen’s technology, process and expertise to add value are:

### OBSERVATION TRAINING AND GAMIFICATION

- ⊕ Developing online/mobile interactive hazard, safety, operations and security training through gaming platforms
- ⊕ Creating brief games to reduce fatigue during breaks for security watch standers at business facilities
- ⊕ Pre job observational testing for – operators, security, command center, field crews for occupational deployment
- ⊕ Providing advanced visualization training, improving observational capabilities, for specific operational tasking
- ⊕ Producing cross training i.e. between OEMC, utilities, and other departments that work in government and industrial sectors and overlap in multiagency emergency response situations
- ⊕ Training UAV operators
- ⊕ Educating the public of all ages on targeted subject areas



### ALARMS AND ALERTS & INTERFACE DESIGN

- ⊕ Aggregating alerts for real-time tracking along with corresponding frequency and duration through enhanced visualization of alarms and alerts
- ⊕ Developing advanced dynamic weather / micro-weather systems alarms, alerts and dynamic heat maps
- ⊕ Prioritizing information through visual Indicators aiding in the moving of OEMC assets for best response
- ⊕ Providing Smart-Grid oversight across generation, transmission, and distribution
- ⊕ Decluttering and reducing visual noise on dashboards
- ⊕ Augmenting mobile command center computer interfaces
- ⊕ Creating better real-time interactive computer interfaces for maps and zones in field operations
- ⊕ Advancing real-time display of multi-variate intelligence for crew and asset deployment for incident response



### COMMUNICATION TOOLS

TransLumen creates dynamic reporting before, during and after emergencies that will access information from outside databases and be published via filtering to internal operations and external customers and other targeted private and public entities.



### USER EXPERIENCE CONSULTING

TransLumen’s applies its user experience and human factors expertise to advance interface design decisions tailored for employees diversified needs, screen scale, device attributes, mobility, and connectivity.

## PAST PERFORMANCE

Government	Commercial
Office of Naval Research (ONR)	Exelon and ComEd (Utilities)
Naval Research Laboratories (NRL)	Lockheed
Homeland Security	Boeing
Office of Interior	Motorola
NASA	Gas Technology Institute
Office of Naval Research grant managed through the Illinois Technology Development Alliance	QinetiQ (British Research Company with Ministry of Defense)
Others....	

## Corporate Data

Business size: Certified Service-Disabled Veteran-Owned Small Business - (SDVOSB) Duns #120807719 CAGE # 3VNT3

The company was incorporated in February, 2000. TransLumen has been awarded US patents #6,433,839 and #6,580,466, and Canadian Patent #CA 2,404,29

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