

A photograph of two men in athletic wear. The man in the foreground is a Black man with a beard, wearing a grey and black Nike hoodie, looking at a smartphone held by the man behind him. The man in the background is an Asian man wearing a grey hoodie and red earbuds, smiling. The background is a blurred outdoor setting.

Luxoft

think.
create.
accelerate.

Luxoft Overview for 

What we do

Luxoft is a global consulting partner for end-to-end digital solutions that drive business change

Our value proposition:

- Solving complex business challenges at a global scale.
- Enabling business transformation.
- Driving operational efficiency.

Our differentiators:

- Deep domain expertise combined with engineering excellence.
- Bespoke attention to your needs, with global scale capabilities.
- Two decades of consistent, on-time delivery and management of complex projects.

Finance	Automotive	Media and Communications	Healthcare and Life Sciences	Telecommunications	Retail and Logistics	Energy and Utilities	Travel and Hospitality



Luxoft at a Glance



12,900+
Employees
Worldwide



280+
Active Clients, FY18
>50% from Fortune 500



907M
Revenue FY2018



~23%
4-Year Top-Line
CAGR



Publicly listed
on the New York Stock
Exchange



Flexible and efficient
engagement model



Best use
of resources



Easily scalable



Low on-site
ratio



Balancing cost
and other factors

Luxoft Growing Global Footprint

Global locations

Americas

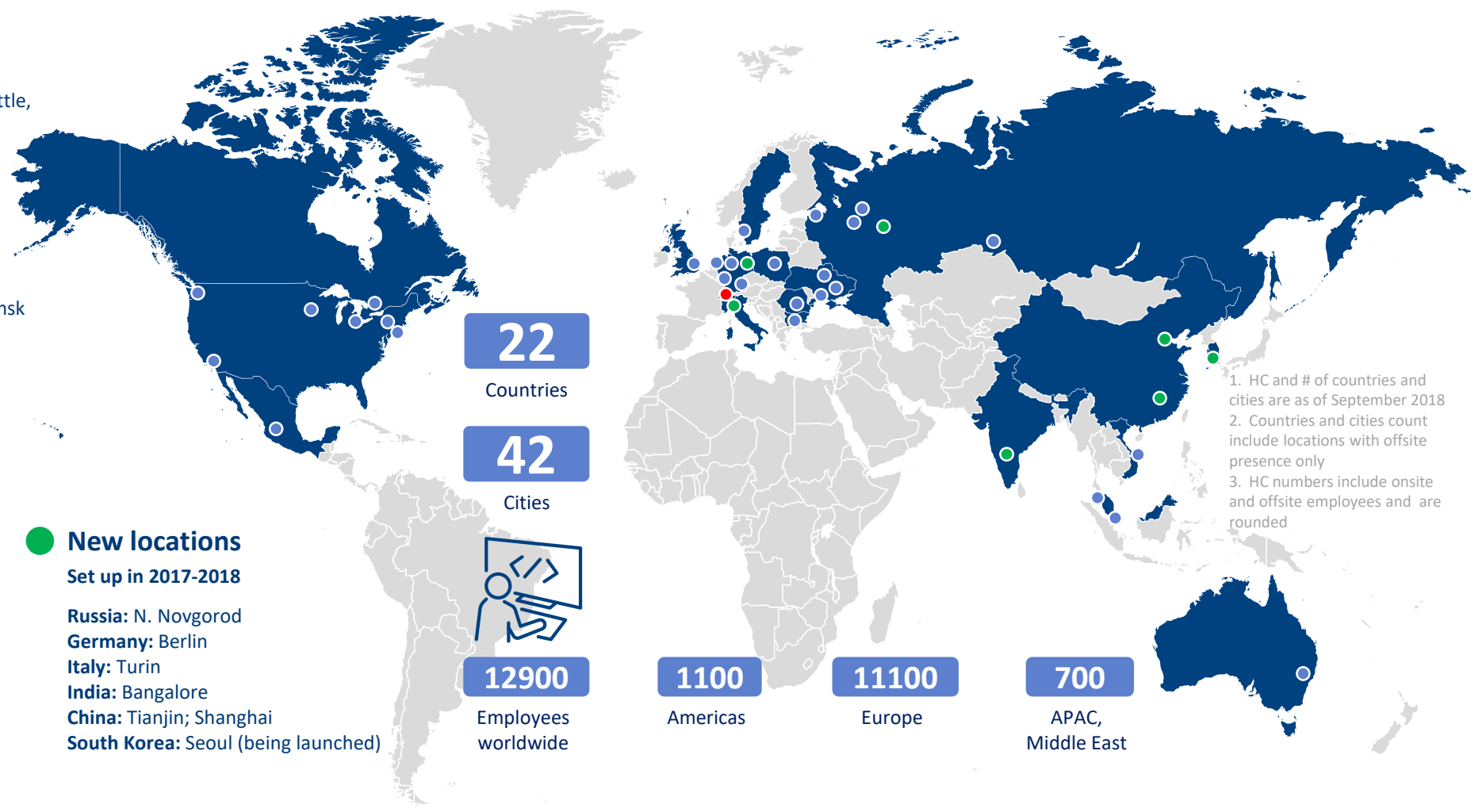
USA: New York, Rochelle Park, Detroit, Seattle, Los Angeles, Minneapolis
Mexico: Guadalajara
Canada: Toronto

Europe

● **Switzerland:** Zug (HQ)
Ukraine: Kiev, Dnipro, Odessa
Russia: Moscow, St. Petersburg, Dubna, Omsk
Poland: Krakow, Wroclaw, Tricity, Warsaw
Romania: Bucharest
Bulgaria: Sofia
Germany: Frankfurt, Munich, Stuttgart (Boeblingen, Leinfelden-Echterdingen), Braunschweig
Netherlands: Eindhoven
UK: London, Welwyn Garden City
Sweden: Gothenburg
Cyprus: Nicosia
Luxembourg: Strassen

APAC

Singapore: Singapore
Vietnam: Ho Chi Minh City
Australia: Sydney
Malaysia: Penang



22

Countries

42

Cities

12900

Employees worldwide

1100

Americas

11100

Europe

700

APAC, Middle East

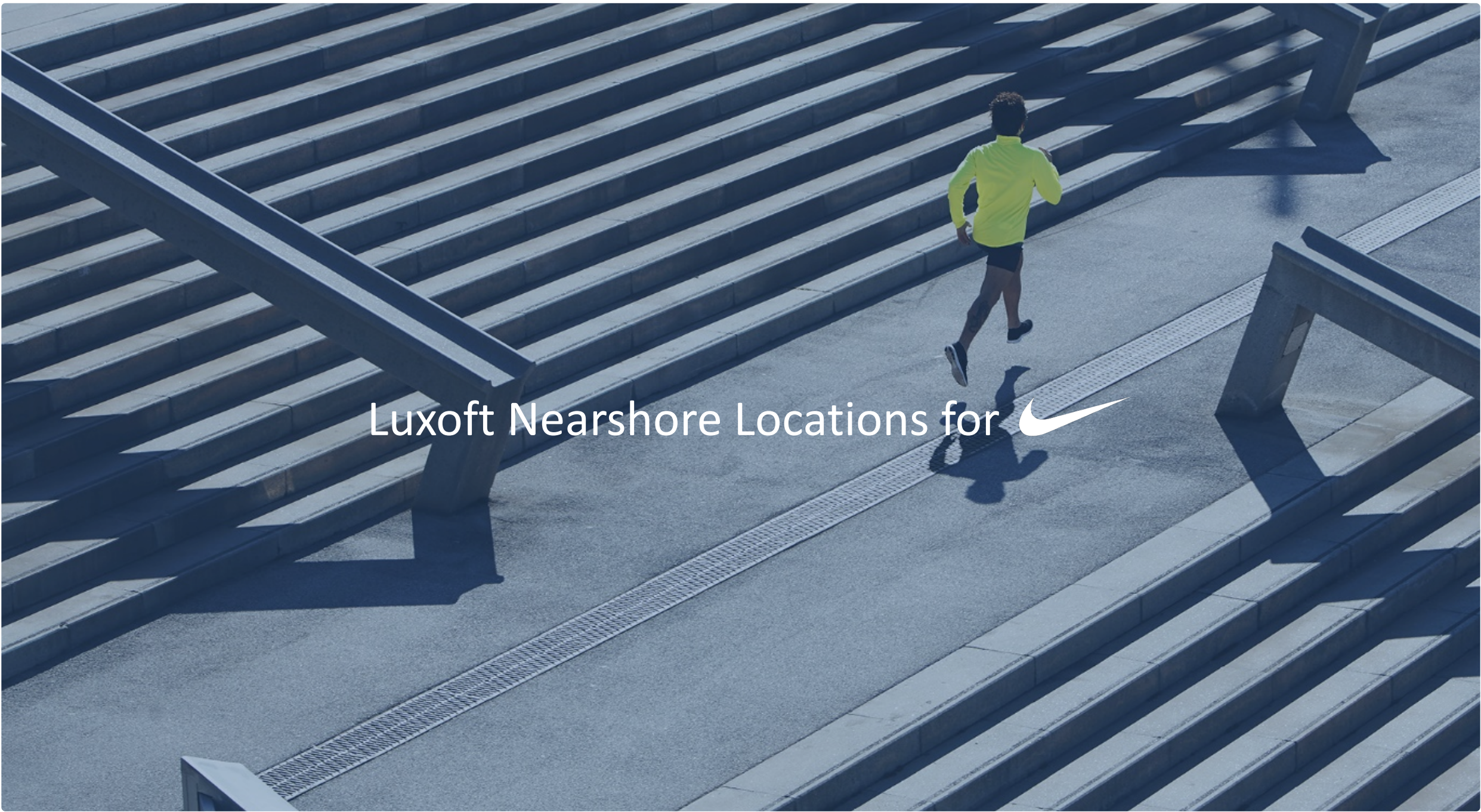
New locations

Set up in 2017-2018

Russia: N. Novgorod
Germany: Berlin
Italy: Turin
India: Bangalore
China: Tianjin; Shanghai
South Korea: Seoul (being launched)

1. HC and # of countries and cities are as of September 2018
2. Countries and cities count include locations with offsite presence only
3. HC numbers include onsite and offsite employees and are rounded

Luxoft Nearshore Locations for 



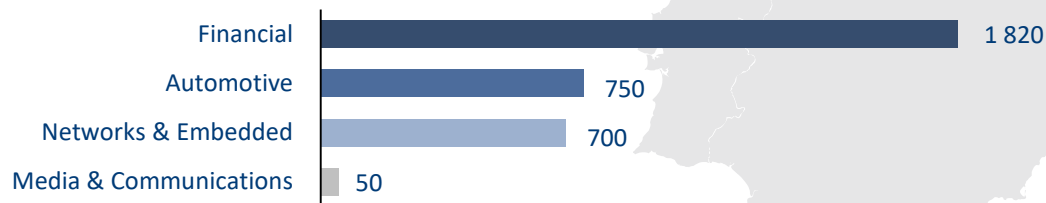
Luxoft Central Europe



Luxoft Central Europe value proposition

- Nearshore Europe
- Experienced IT talent with strong engineering background and aptitude for complex processes
- Strong math & computer science education
- Geopolitical & macroeconomic stability, developed infrastructure, safe & secure environment, high quality of life
- Attractive cost vs onshore locations
- Attractive for relocation from Eastern European countries
- Popular for ITO / BPO captive centers

Key Client's Headcount



 **1810** Luxoft HC



 **1700** Luxoft HC



 **290** Luxoft HC



3800
Total HC

HC numbers are as of September 2018 and rounded

Poland: Location Key Facts



1810

employees



9

years in market



29

clients, R&D function



50 12,500

Luxoft HC IT labor pool



480 21,300

Luxoft HC IT labor pool



165,000

IT labor pool Poland



130

Luxoft HC

37,500

IT labor pool



1150 22,600

Luxoft HC IT labor pool

Luxoft in location:

- Started operations in 2010
- 6 Poland-based relocation specialists



Location value proposition

- Nearshore Europe
- Low country risks
- Attractive cost
- Scalable labor pool
- Attractive for relocation from other countries
- Luxoft is the largest vendor in Poland for investment banks and top-2 fastest growing IT company in 2015



Industries

Financial Services

- Enterprise Trading & Risk Management
- E-Trading & Front Office
- Regulatory
- Risk Management, trading systems
- Credit platforms

Media & Communications

- Targeted advertising
- Content Optimization and Distribution
- Predictive Analytics

Travel

- Booking engines
- Traveler profiling systems

Automotive

- Machine Learning, Computer Vision
- Navigation and ADAS
- Timing Analysis and Real-Time Systems

Networks

- Service assurance
- Visibility & Analytics

Horizontal domains

• Big data

• Information Security

• DevOps

• Digital Experience

Romania: Location Key Facts



1700
employees



19
years in market



30
clients, R&D function



77,000
IT labor pool Romania



1700 **36,000**
Luxoft HC IT labor pool

Luxoft in location:

- Luxoft started operations in 2008 after acquisition. The acquired company had been operational since 2000
- Dedicated relocation specialist



Location value proposition

- Nearshore Europe
- Low country risks
- Strong math & computer science education
- Scalable labor pool with presence of large multinationals
- Large pool of senior talent



Industries

Networks & Embedded <ul style="list-style-type: none"> • Industrial networking • Network Security • Cloud Networking • Edge Computing • Networking switching & routing • Service Assurance 	<ul style="list-style-type: none"> • Software Defined Networking • Network Function Virtualization • Visibility and Analytics • Network Orchestration & Automation 	Financial Services <ul style="list-style-type: none"> • Enterprise Trading & Risk Management • Credit Platforms • Banking CRM • Regulatory • Trade, Market & Reference Data 	Automotive <ul style="list-style-type: none"> • Digital cockpit • Diagnostics
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Horizontal domains

- Information Security
- Digital Experience
- DevOps
- Modern Project Management

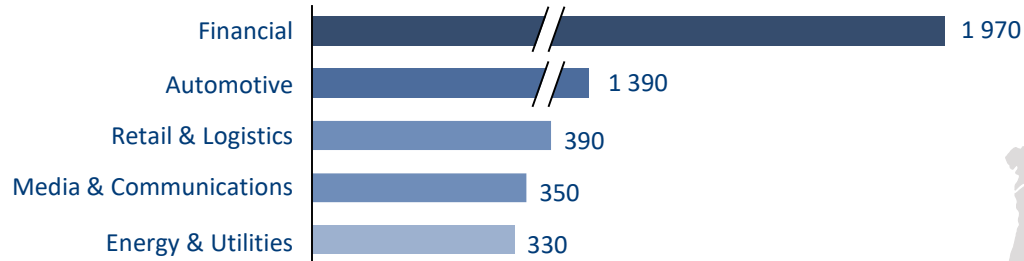
Luxoft Eastern Europe



Luxoft Central Europe value proposition

- Nearshore Europe
- Large & mature IT Labor markets
- Key relocation donor pool due to high interest in relocations. ~ 2200 specialists relocated to other countries since 2014
- Top education programs in Math, Science & Engineering Degrees
- Premium compensation in IT industry makes IT career extremely attractive

Key Client's Headcount



6220

Total HC



2690

Luxoft HC



3530

Luxoft HC

Russia

Ukraine

HC numbers are as of September 2018 and rounded

Russia: Location Key Facts



2690

employees



19

years in market



66

clients, R&D function



Saint Petersburg

830

71,300

Luxoft HC IT labor pool



Moscow

1250

166,300

Luxoft HC IT labor pool



Dubna

60

1,200

Luxoft HC IT labor pool



Nizhny Novgorod

40

11,900

Luxoft HC IT labor pool



Omsk

510

7,700

Luxoft HC IT labor pool

475,000

IT labor pool Russia



Luxoft
in location:

- Started operations in 2000



Location value proposition

- Strong math & computer science education
- Strong domain expertise availability
- Nearshore Europe
- Attractive cost
- Scalable labor pool



**LUXOFT
CORE
EXPERTISE**



Industries

Financial Services

- Enterprise Trading & Risk Management
- E-Trading & Front Office
- Regulatory
- Banking CRM
- Trade, Market & Reference Data
- Corporate Banking
- Retail Banking

Media & Communications

- Targeted Advertising
- Content Optimization and Distribution
- Predictive Analytics

Logistics (SME Location)

- Sensors solutions
- Shipment Booking and Tracking
- Location and Condition Monitoring
- Supply Chain Management

Automotive

- Digital Cockpit; Navigation and ADAS
- Timing Analysis and Real-Time Systems
- Telematics, connectivity and media
- AutoSAR adaptive
- Blockchain for connected cars

Retail

- In-store operations
- Store Technical Operations
- Visual shelf monitoring

Manufacturing

- Smart Factory
- Client Facing Applications
- Engineering data management

Healthcare & Life Science

- Medical Devices

- Digital Marketing

- Provider Lifecycle

Ukraine: Location Key Facts



3530
employees



14
years in market



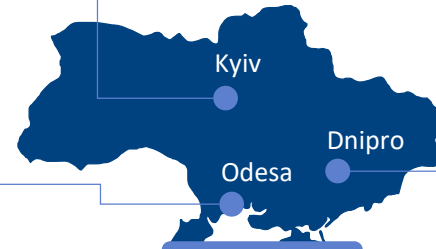
76
clients



2430 **52,200**
Luxoft HC IT labor pool



810 **6,700**
Luxoft HC IT labor pool



118,900
IT labor pool Ukraine



290 **7,800**
Luxoft HC IT labor pool

Luxoft in location:

- Started operations in 2005



Location value proposition

- Traditional, well-established IT exports market
- Nearshore Europe
- Strong math, science & engineering education
- Scalable & Mature IT market
- Attractive cost



**LUXOFT
CORE
EXPERTISE**



Industries

Financial Services <ul style="list-style-type: none"> • Enterprise Trading & Risk Management • E-Trading & Front Office • Banking CRM • Regulatory • Trade, Market & Reference Data • Treasury Platforms 	Media & Communications (SME Location) <ul style="list-style-type: none"> • Targeted Advertising • Content Optimization and Distribution • Customer Retention • Content metadata, Ratings, Comments, and Rights Management • Predictive Analytics 	Travel <ul style="list-style-type: none"> • Online Travel Agencies • Global Distribution Systems • Corporate Travel Management Companies • Airlines • Railways 	Automotive <ul style="list-style-type: none"> • Digital Cockpit (includes Navigation) • Telematics, connectivity • AutoSAR adaptive
Energy (SME Location) <ul style="list-style-type: none"> • Oil & Gas • Electricity 			

Horizontal domains

• Big data

• Information Security

• Modern Project Management

• Digital Experience



Services and Differentiators

Core Horizontal Offerings

Combine all these building blocks to unlock true innovations

Innovate to accelerate delivery, increase agility and overall reduce cost



Cloud

Organisations moving to private + public cloud platforms to gain flexible compute resources, leverage new pricing models making cloud much cheaper than on premise computing (spot pricing)



Devops

Supporting continuous delivery builds for faster time to market, better engineering efficiency and transparency to all levels of the team



Automation & containerisation

Automate large scale infrastructure to drive efficiency and correctness. Capture all parts of the technology stack and rebuild in an instant



New architectures

Microservices supporting flexible, scalable 24x7 delivery



Modern project management

Project Infrastructure, Collaboration Platforms, Agile Training & Consultation

Innovate to transform the business



Streaming architectures

Real-time information and processing that allow a business to react and drive intelligence platforms



Data lakes & interactive notebooks

Store every action, artefact and decision. Support regulations and compliance, track user activity and 360 degree/insider threat



Data science

Mine massive volumes of data to get actionable insight and build business opportunity through data analytics



Machine learning

Automate decision making, collect and develop models to drive efficiency and transform organisations derived from real-time streams and/or data lakes pools



Blockchain

Projects and PoC's delivery, Exec Briefings, Advisory/feasibility studies, Vendor Selection

10 Key Luxoft's Differentiators



Flexibility

- 1 **Rapid team ramp-up and release** based on Client's and project(s) needs
- 2 **Managers with deep technical background** who are grown inside Luxoft
- 3 **Easy to adopt to Client's business/procurement procedures** for fast moving



Focus on Time to Value

- 4 **Ready to start project with minimum available requirements**, adjust the documentation and estimates as we go
- 5 **Ready to change priorities and requirements 'on the fly'** based on Client's needs
- 6 **Proof-of-Concept Approach** to check solution value. Ability to provide MVP quickly into the hands of the business



Economic Efficiency

- 8 **Low-Blended Rates** due to the best onsite/offshore ratio and **Speed of Development** allow to accomplish work with the best price on the market
- 9 **Zero Defect Quality** allows to spent money on feature development rather than bug fixing
- 10 All Key Luxoft Differentiators mentioned on this slide allow to **speed up Return Of Investment** in solution(s)



7 In-house Agile Practice allows to constantly adapt project(s) execution to the **Client's requirements**. Certified trainers are ready to consult Client's personnel to apply Agile framework

Agile Expertise

Luxoft is a prominent Agile practitioner and a renowned for its software engineering skills and quality. We successfully implement Agile principles in our everyday work and have an established Agile CoE to drive corporate Agile/Lean initiatives ranging from facilitation of Scrum/Kanban practices setup to the development of process transformation strategy. We are accredited to train and certify both internal and external professional to the reputable industry standards.

Process audits and gap analysis
Agile/Lean organizational transformation
Agile process and environment setup
Agile coaching and consulting
Certified ICAgile, Scrum.org, Management 3.0 trainings
Custom trainings and workshops
Public Agile/Lean webinars
Engineering practices implementation
Agile process scaling with best-in-class resources

No1 Practice In Eastern Europe

- Established in 2004
- 70+ customers
- 250+ ongoing projects
- 500+ CSM/PSM/ICP
- 2700+ Agile practitioners
- 20+ internal Agile Coaches



Scrum Maturity Assessment



Digital Accolades

Regularly awarded and recognized by 3rd party institutions

**Amazon
Web Services**

Recently named one of **six IT and consulting services companies** to make its blockchain advisory and development services available to AWS users



A group of four runners (two men and two women) are jogging through a large, dimly lit tunnel at night. The runners are wearing various athletic gear, including jackets and shorts. The tunnel has a concrete ceiling and walls, and a stone wall is visible on the left. In the background, there are trees and a signpost with directions to various locations like 'Museum', 'West Gate', 'Special Access', 'Sports Fields', 'Cycle Storage', 'Green Point Park', 'Men Point', 'Light House', and 'Seaside'. The scene is illuminated by a bright light source from the right, creating long shadows on the ground.

Operating Models

Operating Models



Team extension

- | | |
|---|--|
| <p>Pros:</p> <ul style="list-style-type: none"> • People with proper skills on demand • Full management on Client's side | <p>Cons:</p> <ul style="list-style-type: none"> • Most delivery risks are on Client side • High long-term TCO (total cost of ownership) |
|---|--|

Luxoft Responsibility	• Managed resourcing
Luxoft SLA's	• Recruitment timelines • Staff warranties
Client Responsibility	• Project scope, estimations and planning • Project management • Quality management
Communication	• Regular review of team status by Luxoft and Client • Access to business stakeholders is optional • New tasks are assigned to Luxoft team directly by Client's manager
Luxoft Reporting	• Onboarding status • Timesheets • Nearest deliverables
Pricing Model	• Time and materials



Managed delivery

- | | |
|---|---|
| <p>Pros:</p> <ul style="list-style-type: none"> • Project executed by full-grow project team with a dedicated PM (0.5-1FTE) • Low onsite presence • Mature Luxoft processes, adjustment to Client processes | <p>Cons:</p> <ul style="list-style-type: none"> • Delivery risks are shared b/w Client and Luxoft |
|---|---|

Luxoft Responsibility	• Managed software development • Managed resourcing
Luxoft SLA's	• Recruitment timelines • Staff warranties • Attrition • Project delivery
Shared Responsibility	• Project scope, estimations, planning • Project & Quality management
Communication	• Regular scope, risks, delivery status review by Luxoft and Client • Access to business stakeholders is recommended (direct/via Client PM) • Scope changes requests are coordinated by Luxoft PM
Luxoft Reporting	• Timesheets / Deliverables • Project schedule status • Project milestones & risks
Pricing Model	• Time and materials • Fixed price for unit work/per team



Managed services

- | | |
|---|--|
| <p>Pros:</p> <ul style="list-style-type: none"> • Full service in particular business domain • Low onsite presence • All delivery and support risks are on Luxoft side • Low long-term TCO | <p>Cons:</p> <ul style="list-style-type: none"> • Need efforts at the beginning to provide clear vision and agree on the scope |
|---|--|

Luxoft Responsibility	• Managed product and service delivery • Managed software development • Managed resourcing
Luxoft SLA's	• Delivery timelines • Delivery quality • Delivery performance • Support quality
Client's Responsibility	• Provide business vision • Accept results
Communication	• Regular scope, risks, delivery status review by Luxoft and Client • Direct access to business stakeholders is required • Scope changes requests are coordinated by Luxoft PM
Luxoft Reporting	• Deliverables • Project milestones & risks
Pricing Model	• Fixed price fixed scope • Risk and reward



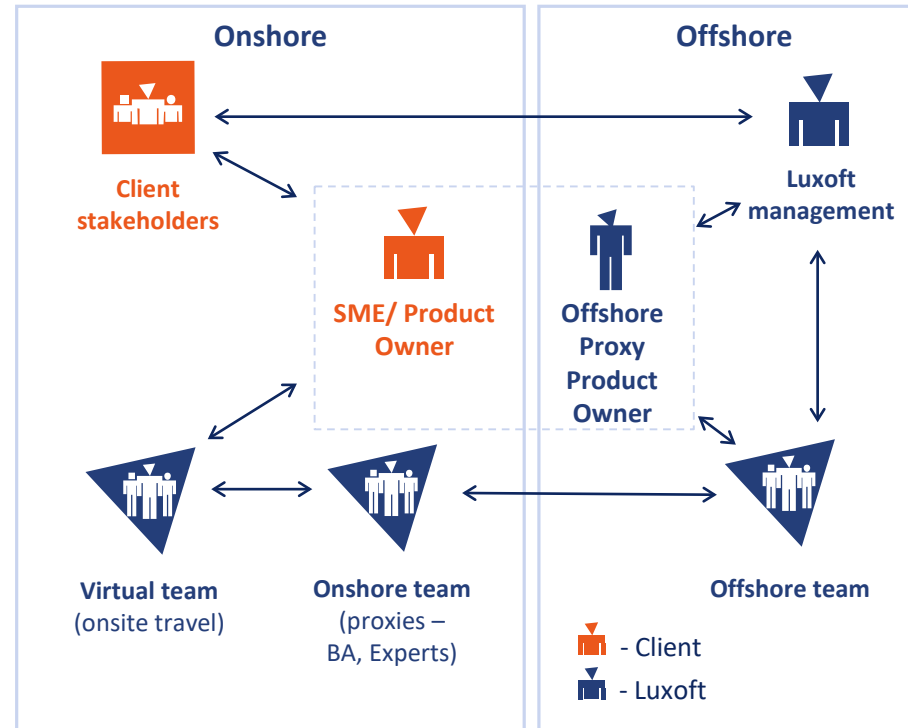
Build-operate-transfer Building a fully functional team – Operating efficiently – Becoming a part of Client's team

Onshore and Offshore Services: Luxoft Gives You More

Onshore Delivery

- Business and stakeholder relationship management
- Project governance and prioritisation
- System architecture and strategy
- Project planning
- Dependency and risk management
- Business requirement discovery and elicitation
- Functional requirements
- Technical requirements
- Infrastructure and resource procurement
- User Acceptance Testing
- Deployment

Key focus: relationship management, requirement management



Methodologies

- Agile: Scrum, Kanban, Lean
- Waterfall methodology
- RUP, MSF
- Client proprietary methodology
- Extreme Programming (XP)

Engagement Models

- Staff Augmentation
- Managed Capacity
- Book of Work
- Platform Management

Offshore Delivery

- Highly skilled resources, with strong STEM education
- Cost efficient
- Responsibility for product quality
- End-to-end functionality delivery
- Regular artefact delivery
- Team level project management and quality assurance
- Automated testing, continuous integration, build aligned to the client's requirements backlog
- System Integration Testing
- Deployment preparation

Key focus: development, testing and integration



Case Studies

Digital merchandising and customer engagement analytics

Big Data, IoT, Cloud

Summary

Luxoft works with a leading consumer electronics firm to manage the digital ecosystem of products and devices in the company's 100+ retail stores around the world.

Business goal

Create an engaging and memorable retail experience in order to bring more customers to their brick and mortar stores and increase sales to combat the growing popularity of internet shopping.

Solution

- Developed an interactive in-store application suite that gathers real-time customer data and displays relevant products for customer based on customer behavior with the display
- Created a dashboard to monitor both customer behavior analytics over time across all 5000+ in-store displays
- Made this a cloud-based suite, so client can configure devices, push demos and promotion offers from any centralized location to every store
- The suite quickly adapts to new products, services and brands with immersive content.

Results

- Creates a unique and immersive personal experience for the customer that is tailored to their needs, helping the customer explore what they want to see in order to increase the chances of purchase
- Allows client to manage all displays at once from one location in order to save time and reduce costs
- Can quickly promote any product/service/brand, so customer can always find info on what they're looking for, boosts customer satisfaction



IT Automation



Remote deployment



Real-time ticket support

Technology

Microsoft Azure, Microsoft Power BI, Azure Data Lake, Azure Stream Analytics



Hyper Contextual Digital Signage

IoT, Big Data, Cloud, Mobile

Business goal

A leader in consumer packaged goods challenged Luxoft to deliver a more personalized shopping experience to drive increased sales at more than 100 premium grocery store locations across the US

Solution

- Created customized in-store displays that surface personalized offers to consumers in the aisle based on purchase patterns and preferences.
- Solution strengthens brand through “meet the producer” videos and extended product information
- Pushes notifications on sales and other promotions aligned with consumer habits and preferences to a branded mobile application.

Results

- Developed a working solution in 2 months
- Solution creates tighter customer connection to the brand
- More relevant/attractive point of purchase vs buying online
- Display interactions measurable for future optimization

Technology

Hardware: beacons

Software: Microsoft Azure, iOS



Customer Interaction Retail Analytics

IoT, Cloud

Business goal

A major American eyewear retailer was seeking a non intrusive method to determine how customers interact with their products and how product placement or advertisements impact customer movement within the store and it's vicinity.

Luxoft delivered solution

- Luxoft developed a solution that effectively collects, processes, and visualizes the required IOT telemetry data into a cloud-based data processing platform
- Using multiple 'smart devices' with cameras located in the store displays. These cameras perform basic facial recognition and send the images to a local gateway which uses a localized micro-service to refine and package the face images from all the cameras and send the data to the cloud
- Cloud based cognitive services are used to match the individual faces and determine characteristics such as gender, age, emotion etc.
- Further micro-batch based processing of the captured data is performed to provide analytics of the customer movement between cameras and with different products

Results

- Gained a greater understanding of retail purchasing behaviors in the stores in order to better serve their customers
- Valuable near real-time and retrospective insight is brought to the in-store team and back office functions

Technology

Commodity hardware (Raspberry), OpenCV library, AWS IoT/Greengrass, AWS Rekognition, Tableau and Looker for BI and Big Data Analytics



Retail Store Inspection Automation

Data Science, Machine Learning, Prototype

Business goal

One of the largest food retailers in Russia challenges Luxoft to employ new technology to automate the process of visual inspection of planograms – placement of products on the store shelves.

Challenge

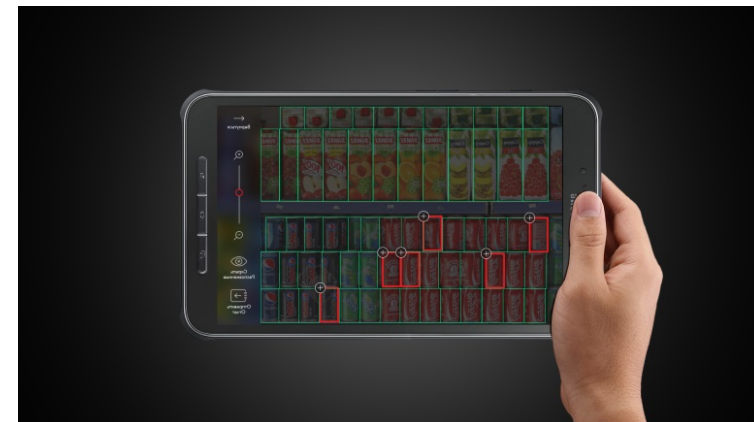
Retail companies usually operate with thousands of different stock keeping units (SKU) with most of them constantly changing. Manual labour inspections were delivering too much overhead and provided limited ability to verify and report current product range on the shelves. Another important item is the detection of unscrupulous merchandisers and potential fraud.

Solution

- Luxoft developed a platform that combined state-of-the-art computer vision and AI (Deep Learning and Neural networks) technologies:
- Application for hand-held devices to make shelf pictures (realograms) that are processed and compared to current planograms. express analysis of image quality.
- Cloud-based DNN-solution responsible for image recognition, processing and matching according to the product catalogue of SKUs.
- Web-application for administrators for product database and planograms management, reporting function.
- Training the recognition algorithm model with over 4,000 products

Technologies

TensorFlow, Caffe, Deep Neural Network



Robot Concierge Software Engineering

Robotics, IoT, AI, Analytics

Business goal

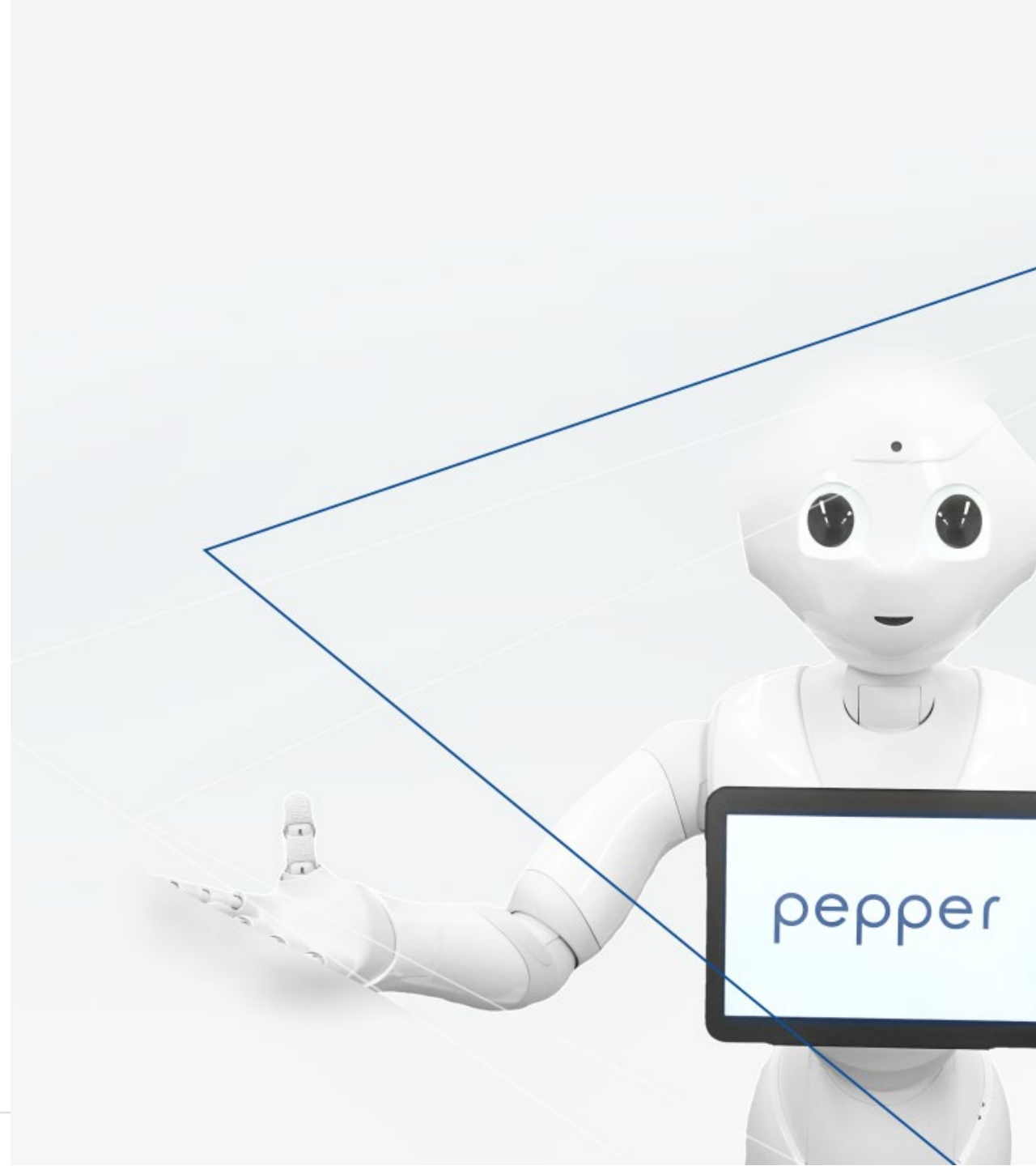
A Robotic engineering and design company was looking for a software development partner to turn their Pepper robots into a cloud connected lobby receptionists.

Solution

Luxoft provided the client with a reputable service mix of software engineering expertise, cloud experience, and modern agile practices. In just 3 months Luxoft created a market version prototype which can interact with customers and answer their questions regarding a business (for example, a price for product or service) as well as provide more generic outer world information (i.e. where is the nearest Starbucks, where I can make a copy of my paper).

Results

- The Pepper robots are used as an effective replacement for lobby/conference receptionist
- Pepper can also entertain and accompany person through business facilities. It can be interacted with using voice or via their garment touch screen



Fleet Telematics For Public Transit

Big Data, Cloud, IoT, Digital Experience

Business goal

A U.K.-based fleet management company challenged Luxoft to develop a system that would help them monitor real-time mechanical performance of fleet vehicles as well as predict individual vehicle maintenance needs.

Solution

- Designed a system with a single web dashboard for monitoring performance from hybrid diesel engines, producing over 4,000 notifications every 4 seconds across thousands of buses nationwide.
- Monitors everything from vehicle speed, to engine health, to fuel cell level diagnostics.
- Delivers real-time driver/fleet dispatch alerts when routine maintenance is required to avoid expensive repairs later.

Results

- Significantly reduced fleet downtime and operations costs.
- Reduces operational costs by anticipating maintenance needs before breakdowns in the field, monitoring emissions in real time, and optimizes fleet logistics.
- Boosted compliance reducing pollution and risk of fines resulting from government mandated emission inspections.

Technology

Amazon AWS, Amazon Kinesis, AWS IoT Platform, EC2, DynamoDB



Connected Airline Club Lounges

IoT, Big Data, Cloud, Mobile

Business Goal

A global airline challenged Luxoft with providing them with a real-time system for monitoring capacity in its lounges at airports nationwide. Through the system, the airline wanted to optimize customer experience in the lounges, reduce overcrowding and offer amenities to non-member customers when capacity allows.

Luxoft Solution

- Real time motion tracking of visitors based on a Microsoft Kinect planted at the entrance to an airline lounge
- Persisted to an Azure IoT backend platform and made the data available for analytics and utilization insights
- Decision support tool publishing data in order to compare occupancy to capacity in real-time on both mobile and desktop layouts

Results

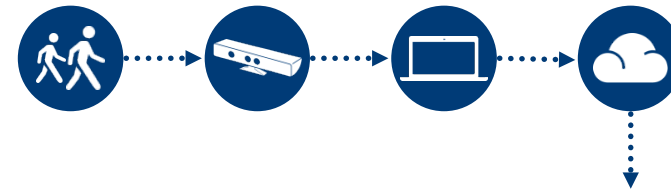
- Demonstrated 90 percent accuracy in determining capacity of lounges at any given time
- Airline can now address overcrowding issues and better manage food and lounge amenities in order to reduce waste and cost
- In the future, may leverage historical analysis, demand forecasting via machine learning, responsive pricing modules

Technologies

Hardware: Microsoft Xbox Kinect, Surface Pro 4 with LTE

Software: Microsoft Azure IoT Suite, Power BI, DocumentDB, D3.js

Fast to market: Developed and deployed solution in 6 weeks



Scalable Cloud-based Media Platform

Big Data, Cloud, Digital Experience



Summary

The project is a social engagement widget for media websites hosting live events. It enhances the user experience with immersive real-time personalization, while providing valuable event statistics.

Business goal

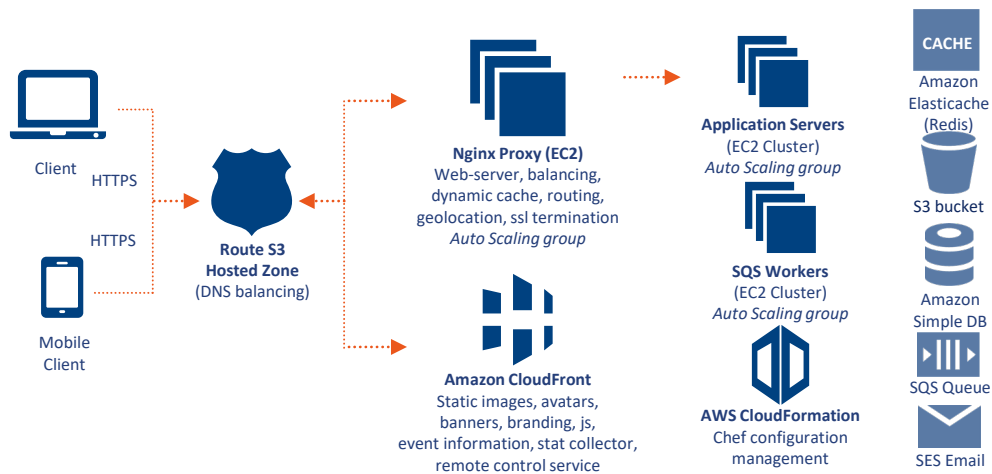
A social media client wanted an interactive social widget to support large TV events. Traffic patterns are highly volatile with casual usage spikes. Statistical data gathered during events is mission critical for advertising and billing. This required a flexible, adaptive and reliable platform.

Solution

- Single-page web application with the core functionality implemented on a Front End (JavaScript, PHP, Node.js)
- Robust horizontal auto-scaling infrastructure
- Real-time and distributed data processing of the statistics
- Infrastructure and code deployments fully automated via Chef, Capistrano
- Visualization of monitoring and application metrics provided with Graphite & Grafana
- Local development environment automated with Vagrant

Results

- Customized content adjusted in real-time based on UI interactions, community behavior, and social trends
- AWS backed architecture
- Run up to 50 live events concurrently
- 5M concurrent active connections, rapid surge capability
- Won 'Best New Marketing and Social Engagement Initiative' award



Smart Space Enablement

Big Data, IoT, Cloud

Business goal

This global leader in office furniture design and manufacturing was looking for ways to build a modern, flexible data management and processing platform to support their quickly growing portfolio of connected products and services across their business.

Solution

- Design of end-to-end data refinery to manage capture, storage, publish transactional and master into a conformed reporting “mart”
- Implementation of an elastic storage/compute enterprise data lake
- Implemented data science Hadoop clusters that can be elastically scaled
- Produced Power BI dashboards and notebooks for data exploration
- Image and sensor telemetry correlation for space utilization/optimization
- Implemented tokenization/encryption mechanism for PII data
- Automated metadata repository for management and reporting
- Scheduling and integration components for data quality processing

Results

- Established a scalable, elastic data management and processing platform to support current and future smart space data sources
- Establish a secure, easily extensible multi-tenant environment to service their internal and customer data and analytics needs.



Technology

Microsoft Azure, HDInsight, DocumentDB, Apache Zeppelin, PowerBI

Ai Solution For Automatic Labeling

Data Science, Machine Learning

Summary

Luxoft developed a solution for automated video and point-cloud (from LIDAR) data annotation to the large multinational automotive supplier.

Business goal

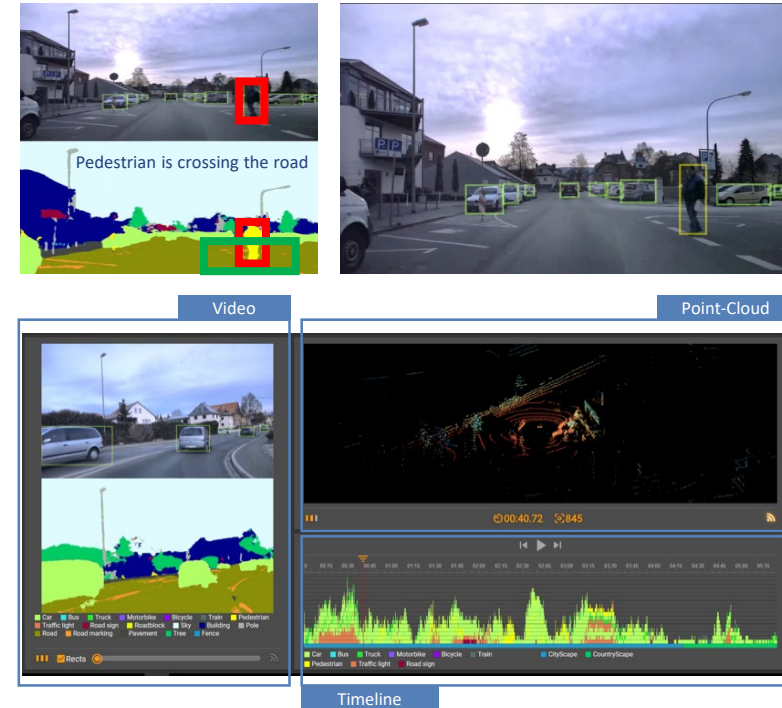
Algorithm development for automotive industry requires a lot of data for testing. These data must be labelled, i.e. objects of interest must be marked and named. Annotated data, so called ground truth is very important for testing of active safety solutions. These labels are used to build test scenarios and cases (for example: pedestrian is crossing the road). In most cases annotation is performed manually which is time and resource consuming and ineffective.

Solution

- Develop a working prototype to demonstrate capabilities of modern Deep Learning approaches to annotate automotive videos automatically
- Design and deliver a User Interface that reflects several windows for scene management:
- Point-cloud (rotate, zoom, shift)
- Video layers (source, bounding boxes, segmentation)
- Timeline (scenes and objects timeline visualization)

Result

Luxoft's application of deep learning technologies allowed the client to reduce 95% of manual labelling effort.



Technologies

AI: TensorFlow, CAFFE, CUDA, Deep Neural Network
 UI: HTML5, JavaScript, CSS3, Angular2, Canvas, RxJS, ReactJS, WebGL

Deep Learning Neural Networks For Adas

Data Science, Machine Learning

Business goal

Emerging compute technologies enable real time vision data processing on small footprint automotive solution. Luxoft offers comprehensive ADAS solution including DNN based pedestrians tracking.

Challenge

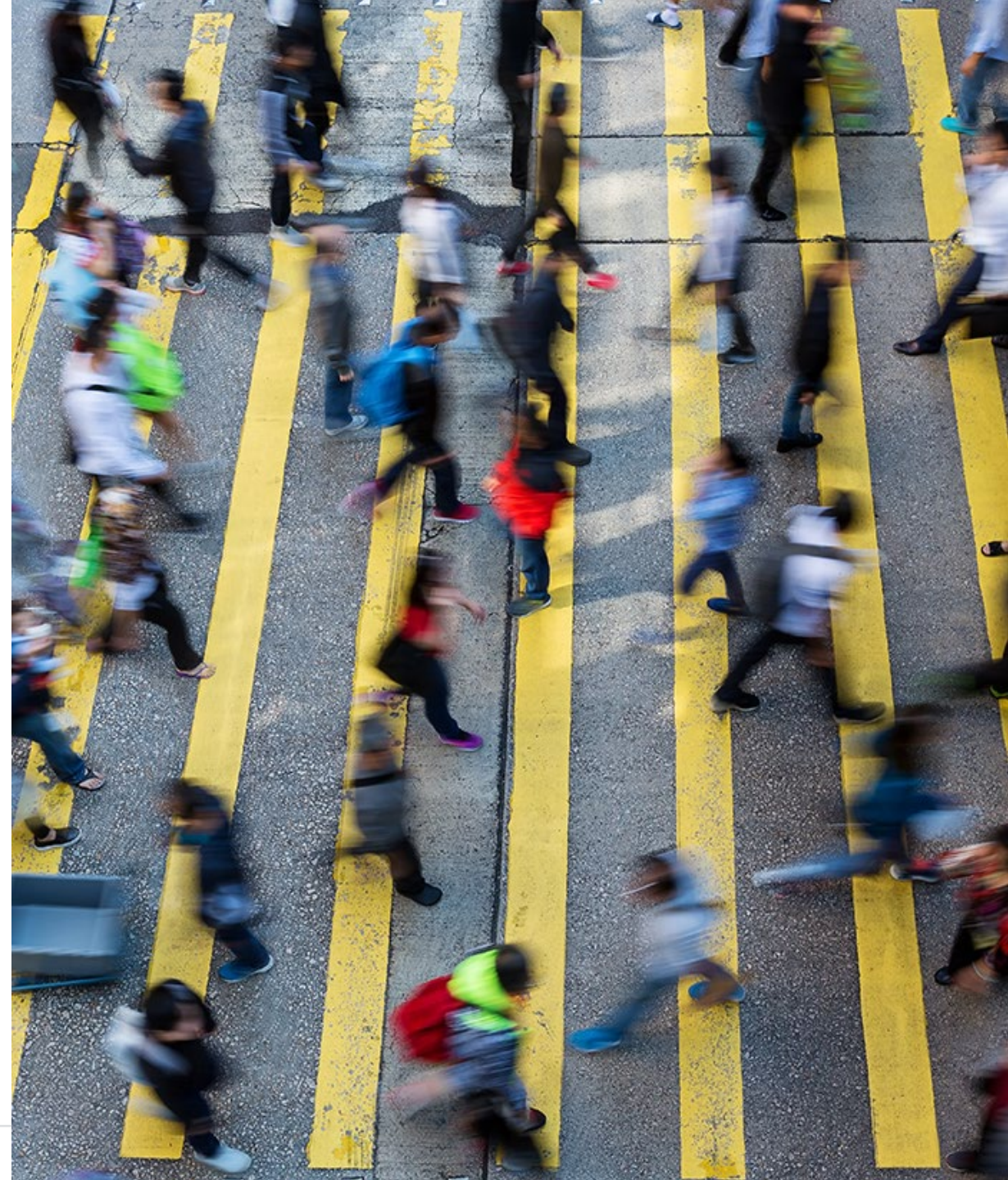
Highly versatile driving environment posses a huge challenge for pedestrians tracking and is a part of life-critical application.

Solution

- Luxoft develops fast algorithms for pedestrian detection:
- Stage 1 – use a simple and very fast filter to detect potential candidates for pedestrians.
- Stage 2 – classify candidates with help of deep neural networks to detect pedestrians.
- ADAS adjusted real-time, full scale Deep Learning Network based on CAFFE environment crafted with OpenCL optimization, with advanced pre- and post-video processing through Histogram Oriented Gradients method and Motion Flow allowing high-speed high reliability data output.

Technologies

Automotive grade OS: Linux, QNX, etc. | OpenCL | Caffe, DNN



A man with a beard, wearing a grey hoodie, grey pants, and a black beanie, is running on a curved walkway. The walkway has a white metal railing and is set against a dark background. The scene is lit with a blue and orange gradient, creating a dramatic atmosphere. The text "Luxoft Transition Experience" is overlaid in the center of the image.

Luxoft Transition Experience

Luxoft Transition Experience | Overview



Proven transition methodology & successful track record

- Proven methodology and successful track record of transitions based on 18 years of experience working across a wide range of industries with large Fortune 500 clients, such as; Boeing, UBS, Getty Images, and Deutsche Bank, which consisted of over hundreds of transferred projects with team sizes ranging from 10 to 250 engineers.
- Luxoft has developed a robust transition methodology and governance model that addresses the transition of the services as it relates to large-scale product engineering programs. This will be leveraged to transfer Application Development and/or Application Support services from incumbent vendors to Luxoft.



Best practices & risk management

- Transition Management Office will be created and a Transition Project Manager will be appointed to run the program.
- Transition plan will be prepared and adjusted based on the Client's requirements.
- All project phases, milestones, deliverables and SLA/KPI will be put in place.
- Transition closure will be based on defined Success Criteria.
- Supporting evidence of Luxoft's delivery capability using demo sessions will be provided.
- If no SMEs and/or documentation available the following approaches will be applied:
 - "Up-to-down": from business processes analysis to system functionality.
 - "Bottom-up": from source code analysis to system components launching.
 - If incumbent vendor is non-cooperative:
 - Start 'stealth mode' (hidden from current vendor activity).
 - Access to the code/materials with one account shared between project team or account that is in use by client's representative.

Key Drivers to Transition



Business

- Long Time-to-Market cycle
- Poor product quality
- Unsatisfied users and stakeholders
- High total cost of ownership



Technical

- Non-scalable architecture
- Code complexity
- System performance issues
- Duplicated code
- Significant technical debt



Process

- Passiveness of current vendor and lack of initiative in making decisions
- Non-transparent delivery process
- Low efficiency of CI/CD and QA process
- Milestones are regularly not met



Client's
Challenges

Luxoft
Response

- Agile delivery framework
- Service delivery model based on partner's accountability and transparent SLAs
- Optimized onshore/nearshore/offshore delivery team ratio

- Incremental practical improvements using up-to-date technologies and processes
- Decommission obsolete platforms and technology
- Mature process to avoid new duplicates and ensure efficient system architecture

- Strong Executive Commitment to make our partnership a success
- Senior, hands-on Account and Delivery Management team
- Mature delivery processes and metrics
- Quality Center support

A man and a woman are crouching on a paved path in a city park at sunset. The man is on the left, wearing a white t-shirt and shorts, with one knee on the ground. The woman is on the right, wearing a white tank top and colorful leggings, leaning forward with her hands on her knees. The background shows city buildings and a clear sky with a warm orange glow.

Luxoft

think.
create.
accelerate.

Thank you!