

**Research and development through  
disruptive innovation, standardization  
and assurance to build a Trustworthy  
Internet of Everything.**



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## INTRODUCTION

iLabs Technologies is a mission-focused company offering a wide range of research and development through disruptive innovation, standardization and assurance to build a Trustworthy Internet of Everything (IoE).

We partner with our clients from start to finish, focusing on their needs while producing new ideas, developing effective strategies, designing high quality and secure solutions.

The Internet of Things brings many opportunities, but also new threats that require holistic security thinking, new business models, technology, standards and regulation. These risks call for end-to-end solutions protecting the entire Internet of Things Lifecycle.

iLabs Technologies developed a Certification Framework for IoT Security for the European Commission.

## COVERING THE IOT SECURITY LANDSCAPE

As security becomes top-of-mind throughout the entire IoT cyber ecosystem, iLabs Technologies have evolved to protect customer assets, thanks to an agile and IoT Security Strategic Partnership approach.

## ABOUT

### OUR MISSION

Our organization is dedicated to working for the common good and doing what's right, in addition to being deeply passionate about building a trustworthy Internet of Everything for the well-being of people and planet.

### WHY WE'RE HERE

iLabs Technologies is a mission-focused company. We are entrepreneurial and creative in our approach and always have your interests at heart, maintaining a continuous dialogue and working together to conduct forensic investigation to reinforce and strengthen your defenses.

### COMMITTED TO EXCELLENCE

At iLabs Technologies we understand that change is not always easy. Our team of experts is ready to help you develop strategies for not only surviving, but thriving in the future.

### WHAT WE DO

Our mission is to catalyze research and development of a trustworthy Internet of Everything (IoT) ecosystem through disruptive innovation, standardization and assurance.

We strongly believe together with our partners we will have a positive impact on our digital future. The iLabs Sustainable Development Goals are in our DNA. We set the standard for a Trustworthy Internet of Everything.

iLabs Technologies offers the comprehensive capabilities and deep industry knowledge necessary to help you solve the most complex IoT issues of your organization.

### WHERE WE'RE GOING

Organizations around the world are using iLabs Technologies to help them protect their business. We partner with our clients from start to finish, focusing on their needs while producing new ideas, developing effective strategies and designing high quality and secure solutions in alliance with our strategic partners.

The Internet of Things (IoT) is made up of some 6 billion devices, and by 2020 the number will reach 25+ billion.

Our Security Architect Specialists drive industry-leading research and development in IoT Trustworthy Execution, Anti-Malware, Cyber Intel, Cryptography, Identity, Privacy and Safety.

We are working to build a future in which public institutions, commercial enterprises and non-profit organizations can exchange and work in a trustworthy ecosystem.

## SERVICES

### PROBLEM SOLVING MADE EASY

iLabs Technologies offers a wide range of Services with the necessary tools and expertise to help protect your business. We partner with our clients from start to finish, focusing on their needs while producing new ideas, developing effective strategies and designing high quality and secure solutions.

### STANDARDS AND CERTIFICATION SERVICES

iLabs Technologies is a member of the **Alliance for Internet of Things Innovation (AIOTI)**, the **European Cyber Security Organisation (ECISO)**, the **European Telecommunications Standards Institute (ETSI)** and the **Open Identity Exchange**. Together with Arthur's Legal, iLabs Technologies has been developing a State of the Art (SOTA) Certification Framework for IoT Security and formed the iLabs Zapped Institute.

iLabs Technologies has unique capabilities and tools to define a custom (IoT) Security Framework based on a customer specific industry, region or solution. This Security Framework is a principal based model with an intelligence layer to dynamically select from more than 30 international IoT related Security Frameworks only those principals that are relevant for a specific solution or product.

This SOTA Security Framework can be offered on a pay per use basis in a secure SAAS service.

After defining a customer specific Security Framework, iLabs Technologies can help develop an IoT Architecture based on best practice Reference Architecture like EIRA, developed by the European Commission. iLabs Technologies will establish specialized testing and certification capabilities for specific standards or (in-country) regulations, e.g. Open Banking/PSD2, eIDAS or GSMA Embedded SIM / Mobile Connect.

### RESEARCH AND DEVELOPMENT

iLabs Technologies fosters and encourages international public and private collaborations among researchers across the globe to build deep expertise with strong scientific fundamentals. iLabs Technologies provides applied research IoT, Smart City and IoT Security together with other research and knowledge institutes and universities.

iLabs Technologies will mentor a student organization in IoT Security through our partnerships with universities like the **Technische Universiteit Delft (TU Delft)**, **Singapore University of Technology and Design (SUTD)** and the **University College London (UCL)**.



## SERVICES

### TESTBED / LAB

iLabs Technologies offers a membership based testbed to Government Agencies, industry and academia to promote a virtuous cycle of innovation in IoT, Smart Cities and IoT Security.

Organizations can leverage the iLabs Technologies testbed / lab for their testing and certification needs and for their training, demo, proof of concept and pilot requirements.

iLabs Technologies will extend their capabilities through international collaborations with other IoT and Smart City labs. iLabs Technologies provides industry users and their partners or customers a vendor neutral customized experimentation, demonstration and validation capability to save cost of hosting their own lab.

iLabs Technologies is able to establish specialized testbed / lab capabilities globally for specific requirements or (in-country) regulations, e.g. for Open Banking/PSD2, eIDAS or Mobile Connect.

## INTEGRATED SOLUTIONS

Built on an infrastructure you can trust designed to drive enterprise transformation

As enterprises adopt IoT devices and manufacturers develop enterprise tools, there is a shared responsibility to ensure data is fortified against attacks.

## SOLUTIONS FOR YOUR BUSINESS

iLabs Technologies offers a wide range of Integrated Solutions designed with simplicity in mind to simplify your business. iLabs Technologies Integrated Solutions adds indispensable management capabilities and scales to accommodate growing numbers of users, applications and servers, securely, reliably and cost-effectively.

## TECHNOLOGY PROVIDERS

iLabs Technologies works in close partnership with technology providers globally to be able to provide state of the art Software as a Service products and solutions in the field of IoT, Smart City and IoT Security. These vendors are selected because they have been developed in accordance to our sustainable development objectives and State of the Art (SOTA) Security Framework.

These solutions have either been certified by iLabs Technologies, other certifications labs or have proven interoperability with international standards and reference architectures. These solutions can be delivered as a Software as a Service model and cover the whole life cycle from Strategy Definition, Design, Development, Life Cycle Management and Assurance. For the development of a Strategy or High Level Architecture.

iLabs Technologies works together with **BizzDesign** to support distributed teams with Digital Transformation Decision Making, Business Modelling and High Level Architecture Design. To evaluate new technologies like Biometrics or Block Chain iLabs Technologies works together with partners like **NokNok** and **Evernym** to take away the technical challenges to be able to focus on the specific use case or business outcome.

## ADVANCED RESEARCH

iLabs Technologies provides Advanced Research in IoT Security and Smart City Solutions Design, Testing and Certification, Innovation Centre and Exclusive Event Services, System Integration & Managed Smart City and Security Services.

Main expertise is in technologies like BlockChain, Artificial Intelligence, Identity Services, Quantum Safe Crypto Services, Cyber Intelligence, Law Enforcement and Certification Frameworks.

## INTEGRATED SOLUTIONS

### MANAGED SERVICES

iLabs Technologies works in close partnership with technology providers globally to be able to provide state of the art Research and Software as a Service products and solutions in the field of IoT, Smart City and IoT Security.

### BLOCKCHAIN AS A SERVICE (BAAS)

The security of the internet is very fragmented as every industry and region is launching their own initiatives adding more and more silos. Governments and commercial organizations have been building centralized databases for digital identities and personal data. Every day you read reports of data breaches, identity theft and cybercrime. When more than 20 billion devices are on the internet this model is no longer sustainable.

Solving the fragmentation problem begins with a disruptive innovation for digital identities. To establish a Trustworthy Internet of Everything you need an identity that you really own yourself: a self-sovereign identity with verifiable claims. This enables any person, organization, or thing to interact directly with each other in a trustworthy fashion.

iLabs Technologies has a strategic partnership with **Evernym**, the developers of **SOVRIN**. The only open source based public distributed ledger (blockchain) with a trust framework and governance body "**The Sovrin Foundation**". iLabs Technologies provides the Blockchain as a Service (BAAS) based on the State of the Art technology from Evernym on a pay per use basis.

### CRYPTO AS A SERVICE (CAAS)

Today the protection of sensitive data and the signing of digital transactions has been broken. And shortly with the arrival of quantum computing we need to apply disruptive innovation for cryptography. To be able to protect sensitive information across different cloud service providers and datacenters we need a state of the art crypto services approach.

To help organizations with the design, development and deployment of data protection and digital signing we have partnered with the leader in Crypto: **Cryptomathic**. iLabs Technologies provides Crypto as a Service (CAAS) based on the technology from Cryptomathic. Our customers and partners can now leverage the State of the Art from Cryptomathic for Hardware Security based cloud data protection services and eIDAS based digital certificates and qualified trust services.

### IDENTITY AS A SERVICE (IDAAS)

iLabs Technologies provides one Digital Identity as a Service (IDAAS) Platform for the Internet of Things, Blockchain and Artificial Intelligence based on their partnership with **Forgerock**. This solution is ready for Open Banking / PSD2, GDPR, IoT / Edge Security, Mobile Connect, eIDAS and many other specifications. This State of the Art Identity Service can be provided on a pay per use basis and in compliance with the highest security standards on a dedicated Docker container based Dev/Ops environment. iLabs Technologies will provide the Security Framework, Reference Architectures and best practices for a Trustworthy Identity Service and support with the Security and Privacy by Design, Secure Development, Testing & Certification and Continuous Assurance.

## **INTEGRATED SOLUTIONS**

Quickly visualize and  
discover insights  
from your data and  
collaborate across  
teams.

### **CERTIFICATION FRAMEWORK**

iLabs Technologies offers the comprehensive capabilities and deep industry knowledge necessary to help you solve the most complex IoT Security and AI challenges of your organization.

Our Security Architect Specialists drive industry-leading research and development in Internet of Things, Trustworthy Execution, Anti-Malware, Cyber Intel, Cryptography, Artificial Intelligence, Identity, Privacy and Safety.

### **THE SECURITY SURROUNDING ICT INFRASTRUCTURE**

The rise of Internet of Things and the digitalization of business mean greater reliance on Information Communication Technology (ICT). The security surrounding ICT infrastructure and the data it handles will become even more critical in the digital environment.

The world is becoming increasingly connected. The Internet of Things and the digitalization of business means a greater reliance on ICT. While this will bring huge opportunities, it will also lead to an increase in risk. The Security, ICT Infrastructure and the Data it handles will become even more critical in the digital environment.

iLabs Technologies works together with data technology providers to create insights from data streams to innovate and make smarter decisions based on facts, instead of a gut feeling. Being data driven is about giving the business decision makers the power to explore data and make predictions based on facts.

### **BECOME A DATA DRIVEN ORGANIZATION**

We are entrepreneurial and creative in our approach and always have your interests at heart, maintaining continuous dialogue and working together to conduct forensic investigation to reinforce strengthen your defenses.

### **RELEVANT DATA AT SCALE**

At iLabs Technologies we love science and we love computing, don't get us wrong. But the reality is we care about big data because it can bring value to our companies, our lives, and the world.

We integrate key system data streams into a distributed data ecosystem that enables fast respond to constantly changing data, market factors and business demands.

A dedicated engagement database provides the ability to scale without performance loss and to have a viable amount of resource necessary to manage and to identify automated correlation against detection as well as user driven querying and analysis.

### **PATTERN DISCOVERY**

It's not the data itself that is valuable, it's the actionable insights that it can generate. With the data in place the engagement database powers multiple interactions and experiences by liberating the full potential of data at any scale to detect anomalous patterns within complex data streams.

Combining advanced predictive analytics and cognitive algorithms are based on the scientific disciplines of artificial intelligence and signal processing which are crucial factors in leveraging these operational advantages is the time-to-insight and time-to-action.



## **INTEGRATED SOLUTIONS**

### **FORENSIC INVESTIGATIONS**

Discovering and understanding sustained changes in data streams through advanced analytics and dynamic step-by-step processing.

Analysts can investigate data across multiple dimensions within a distributed data ecosystem and discover correlations between seemingly unrelated events, map activity patterns based on origin, and identify critical vulnerabilities across enterprise systems and networks.

### **REINFORCE DEFENSES**

IoT security is a particular area where standard IoT devices don't meet typical defense security needs. iLabs Technologies have unique capabilities and tools to define a custom (IoT) Security Framework based on a customer specific industry, region or solution.

Security data analytics aims to minimize the risks associated with the technology and to enable analysts to classify as well as categorize cyber threats. Securing data comes with unique challenges besides being a high-value target.

We help organizations to draft a list of security criteria smart technology vendors and service providers need to meet to reinforce their security defenses.



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