



PÓLO DE COMPETITIVIDADE DAS TECNOLOGIAS
DE INFORMAÇÃO, COMUNICAÇÃO E ELECTRÓNICA

ICT catalogue

Technologies and R&D competences







ICT CATALOGUE

what's this?

This catalogue is part of the Technology Exhibition which will take place under the event ICT4FUTURE: SECURITY & OPEN ICT. This event will gather international experts on the areas of Cyber Security and Open-based Solutions and will provide participants with an opportunity to know better Portuguese products and services of excellence in the ICT sector, as well as to interact with major Portuguese companies and network with other attendees to explore future collaboration opportunities. Therefore, the catalogue presents key Portuguese ICT technologies and R&D competences in the fields of Cyber Security and Open Source, including a short presentation of the technology, main innovative features and applications, as well as key ICT competences and technologies of major R&D institutions in Portugal.

The ICT4FUTURE: SECURITY & OPEN ICT event is part of the project +560ICT4Future, co-funded by COMPETE 2020 and promoted by TICE.PT, with the support of SPI Ventures - Criação e Desenvolvimento de Novos Negócios, S.A.

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ICT **technologies**

Cyber Security 

Open Source 

01.



CERTVOTE ELECTRONIC VOTING SOLUTION



MULTICERT



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www.multicert.com



Technology commercialisation

multicert

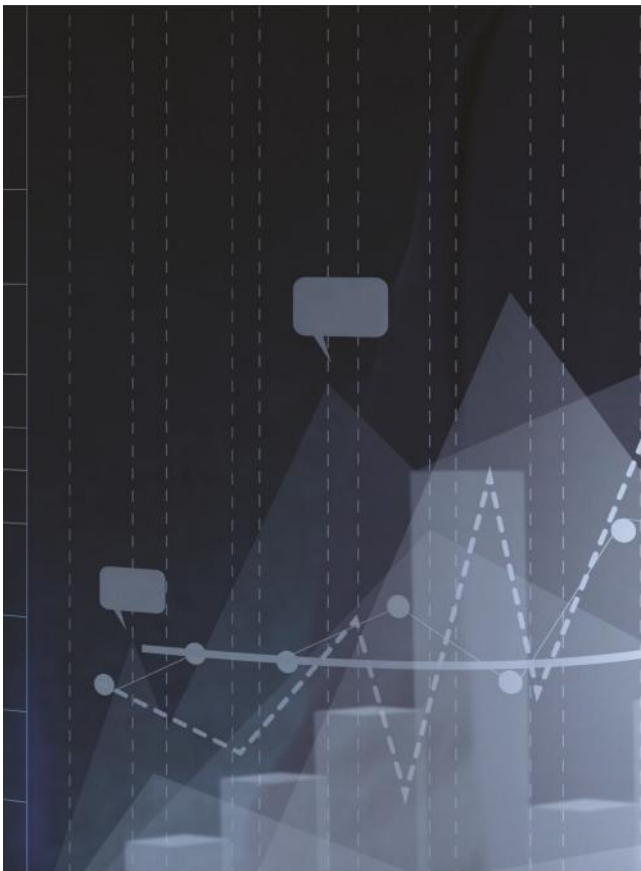


SHORT DESCRIPTION

CertVote is a secure and simple platform which allows electronic voting to take place exclusively or along with in-person voting (Electronic and/or Paper) and postal voting.

As it is possible to vote simultaneously on the Internet, in person or by post, voters may access to the elections more easily and exercise their right to vote confidentially and securely.

With CertVote, participations in elections can be increased and reability in polls can be ensured.



INNOVATIVE FEATURES

Key innovative features include:

- Sensitive data stored in dedicated cryptographic hardware, non-exportable;
- m-of-n scheme for secure and reliable secret sharing between voting committee members;
- Audit logs;
- Multifactor authentication;
- Automated counting;
- Customizable ballots - logo, options, text;
- Web back-office for administration and operation;
- Multilingual;
- Support and tutorials.

MAIN APPLICATIONS

CertVote can be used by:

- Professional associations;
- Financial institutions & banks;
- Political parties;
- General assemblies;
- Governments;
- Sports clubs.

02.



CIBER-SECURITY



IP Telecom S.A.



Nassri Abokhalaf



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www.iptelecom.pt



Technology commercialisation



SHORT DESCRIPTION

IP Telecom Cyber-security is a subscription based service that enables the customer to have the awareness of presence of malware on his infrastructure.

The service provides a dashboard with the history of Malware events and real-time alerts of new Treaths.





INNOVATIVE FEATURES

Key innovative features include:

- No hardware or software is installed on the customer site;
- Detects any type of malware (including Ransomware) on any device type or operating system in any location of the World;
- Completely passive solution;
- Detection method based on behavior analysis;
- No false positives.

MAIN APPLICATIONS

Cyber-security services can be used in the following applications:

- Real-time Malware detection;
- Faster remediation based on active awareness of the Threat;
- Complementary protection for Onsite Firewall and Anti-virus products.

03.



CITIBRAIN



Ubiwhere



Rui Costa



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www.ubiwhere.com



Technology commercialisation



SHORT DESCRIPTION

Citibrain is a consortium which specialises in smart solutions for today's cities. Its main purpose is to create desirable and livable places, bringing together cities and citizens to improve metropolitan life. Creativity, knowledge and innovation are at the core of Citibrain's strategy.

Today, is focused on growth initiatives - Future Internet and Smart Cities - keeping global environment and urban lifestyle in mind.

The platform provides the means for convergence across different devices and connectivity management solutions, focusing on setting up and managing use cases easily and in a unified way, via cloud-based mechanisms.



INNOVATIVE FEATURES

The platform focuses on Open Data formats for interoperability and on adopting M2M service standards to integrate with third-party platforms and use cases.

This allows for cloud-oriented Big Data services to be implemented on top of existing or newly deployed smart cities.

MAIN APPLICATIONS

The main applications of Citibrain are:

- Smart parking;
- Smart traffic management;
- Smart environmental quality;
- Smart waste and water management;
- Smart card;
- Smart vending machine;
- Smart bike sharing;
- Smart signal monitoring;
- Smart IOT network.

04.



EIDAS QUALIFIED CERTIFICATES



MULTICERT



Salvador Palha



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www.multicert.com



Technology commercialisation

multicert



SHORT DESCRIPTION

eIDAS certificates are advanced digital certificates provided by multicert.

Multicert is the first private Portuguese Certification Authority accredited by the Portuguese National Supervisory Body (GNS) to the issuance of Qualified Digital Certificates.

Multicert, issues eIDAS-ready qualified certificates for persons, as well as electronic seals for companies and organizations.



INNOVATIVE FEATURES

eIDAS provides Complete range of digital trusted third party products including:

- qualified certificates eIDAS-ready;
- qualified timestamps;
- TLS/SSL certificates;
- code-signing certificates.

In addition, it offers value-added services trusted third party services, including:

- Express issuance: qualified in certificates in less than 1 hour;
- Online registration: fill-in the web form and pay online, for your best convenience;
- User area: manage your certificates online;
- Long term validation archival.

MAIN APPLICATIONS

The main applications of eIDAS are:

- Digital signature;
- Authentication;
- Encryption;
- Trusted date/time of signature;
- Long term validation of electronic documents (> 5 years).

05.



GENIO



Quidgest



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www.quidgest.com

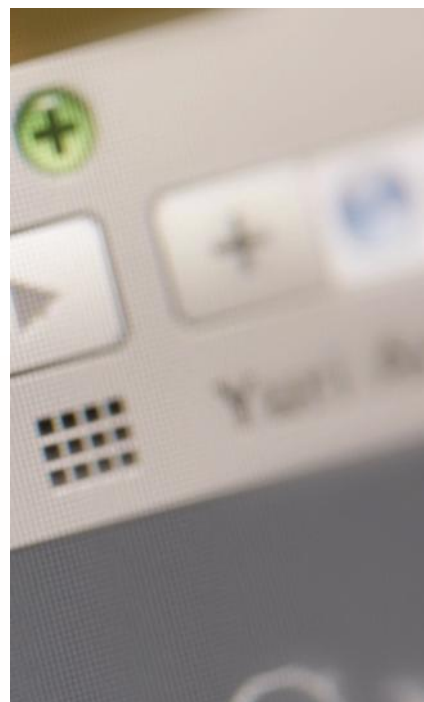


Technology commercialisation



SHORT DESCRIPTION

Genio is a platform for rapid development of comprehensive information systems, combining model-based development with automatic code generation in different programming languages such as MVC, Web services, HTML 5 or C#, among others.





INNOVATIVE FEATURES

Genio combines technological independence, code standardization and quick delivery in multiple open technologies using a single platform. Based on Industry 4.0 modeling and testing concepts and on Agile Software Development methodology, it allows to build or rebuild complex applications in 1/10 of the time comparing with standard software development approaches.

MAIN APPLICATIONS

The main applications of Genio are:

- Short time-to-market management solutions;
- Rapid Technologically Updating of Obsolete Applications;
- Highly competitive solutions getting highest quality software development with 1/10 of the resources;
- Solutions that requires permanent upgrading;
- Management solutions for unique/exclusive business issues;
- SmartSourcing services (OutSourcing software development services with 1/10 of people required).

06.



GYRO



Artica - Creative Computing



Guilherme Martins



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www.gyro.artica.cc



Technology validation/
demonstration



SHORT DESCRIPTION

Gyro is a native Internet of Things robotics platform for edutainment market. It fills the needs of curious minds looking for enjoyable ways to learn physical computing to interact with the physical world. Gyro was developed by a small multi-disciplinary team of experienced professionals developing interactive technologies, building educational robots, prototyping hardware solutions and giving workshops.



INNOVATIVE FEATURES

Gyro consists of a platform that combines Software and Hardware, featured to provide a technology enhanced experience of physical computing. The robot and all the added physical components, materialize the apps and programs of the mobile device into our physical world.

MAIN APPLICATIONS

The main applications of Gyro are:

- Technology literacy platform;
- Hands on creative robotics;
- Educational robotics;
- Curious minds.

07.



IAM



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Business Development Team



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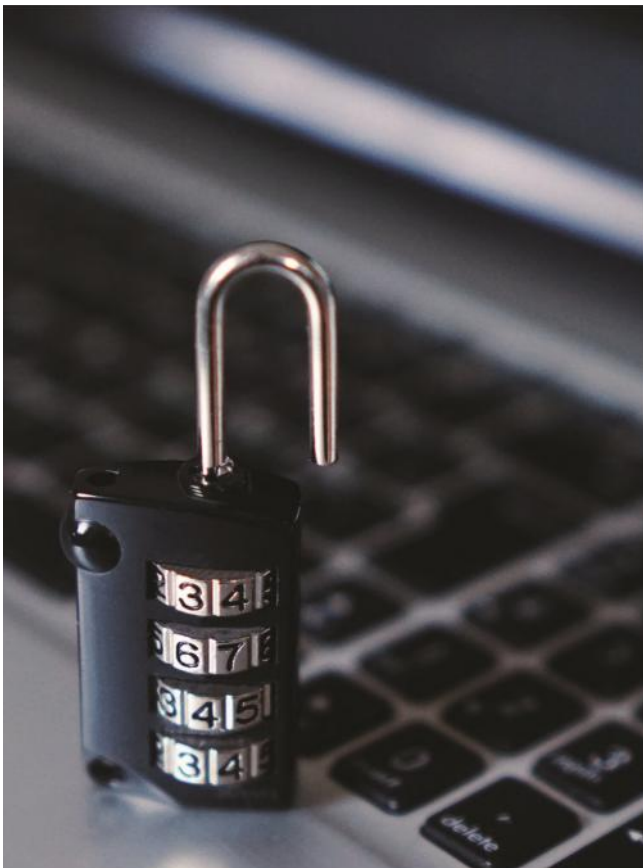
Technology commercialisation



SHORT DESCRIPTION

IAM enables organizations to increase security when exposing sensitive applications and data regardless of whether they are hosted in Cloud or on-premises. A comprehensive and complete IdM solution that enables single sign-on, federated identity management, mobile identity and API security, auditing, entitlement and social identity integration.





INNOVATIVE FEATURES

IAM helps organizations to rapidly comply with regulatory and security rules, by providing comprehensive report and auditing tools. Furthermore, IAM increases agility and reduces operational costs by extending legacy application value, reducing the helpdesk requests related with user's management.

MAIN APPLICATIONS

IAM is intended to support Enterprise's businesses that need to consistently and securely:

- Manage external users (i.e. customers, partners);
- Manage internal users (i.e. employees);
- Secure externalized APIs (i.e. BYOD scenarios);
- Comply with regulatory mandates.

08.



LINUX CAIXA MÁGICA



Caixa Mágica Software



Carlos Coutinho



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Technology commercialisation



SHORT DESCRIPTION

The Linux Caixa Mágica is the most popular Portuguese Linux distribution, aiming to promote and mobilize the open source community around its useful services and applications.

It was mostly targeted to Portuguese or people who live and use Portuguese services, but it may be found interesting for others as well.





INNOVATIVE FEATURES

Key innovative features include:

- Portuguese customisations;
- Services and applications;
- Development environments;
- Applications that are integrated with Portuguese institutions and public services.

MAIN APPLICATIONS

This product is really meant to be very broad-purposed, but its main advantages come with the integration with Portuguese public services and applications.

09.



MIDDLEWARE CC



Caixa Mágica Software



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Technology commercialisation



SHORT DESCRIPTION

The Middleware CC (Cartão de Cidadão) allows different applications and services to be able to take advantages of the functionalities provided by the current electronic chip-based ID cards in Portugal.



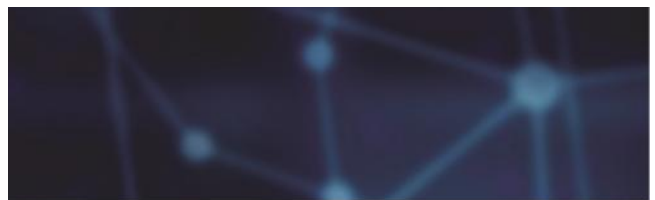


INNOVATIVE FEATURES

This middleware is most useful for eIdentity and eSignature, allowing the interconnection to the public services and the ability to perform digital signature.

MAIN APPLICATIONS

The applications of this product are relevant in all services which require authentication or validation of identity through a secure and trustworthy entity.



10.



MPKI



MULTICERT



Nuno Ponte



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www.multicert.com



Technology commercialisation



SHORT DESCRIPTION

mPKI consist of turnkey Public Key Infrastructure solutions. Multicert develops and deliver integrated PKI solutions that include not only the technological components, but also the complete set of management, administration and operation procedures.

With these services, Multicert ensure the necessary transfer of know-how to the PKI work teams through intensive training programs and expert support throughout all the system's lifetime.



INNOVATIVE FEATURES

Turnkey PKI features include:

- Consultancy: requirements analysis and solution design;
- Development: customize our products to specific needs;
- Provisioning: select, scale and provide IT infrastructure of servers, HSMs, network equipment;
- Installation: configuration, installation, setup;
- Documentation: full set including policies, manuals, diagrams, procedures, forms and inventory;
- Training: hands-on, ensure the necessary know-how transfer;
- Maintenance: preventive, corrective, evolutive.

MAIN APPLICATIONS

The main applications of mPKI are:

- Enterprise identity management;
- Internet of things;
- Electronic driving license;
- Electronic passport;
- National eID;
- Root CA.

11.



MVAULT



MULTICERT



Nuno Ponte



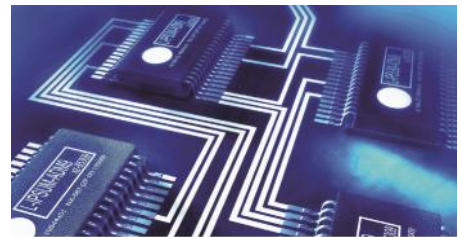
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www.multicert.com

Technology validation/
demonstration

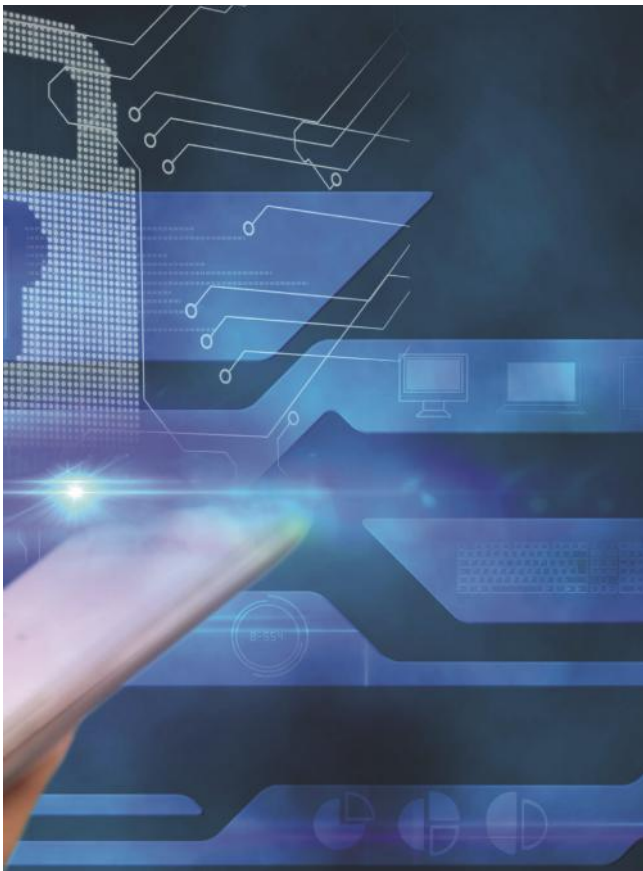
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SHORT DESCRIPTION

mVault is an advanced service for information sharing and preservations. With the increasing dematerialisation of processes and documents, it was necessary to rethink the concept of "vault", by introducing the "digital" element.

Thinking about this solution not only as a pure and simple vault, but also as a secure tool, it is possible to keep information undisclosed, implement collaborative processes to work and distribute information among duly accredited and authorized users.



INNOVATIVE FEATURES

Key innovative features include:

- Shared access control: Access to information stored in the Digital Vault is reserved exclusively to authorized parties and in accordance with the defined rules, including m-of-n rules (M authorized users from a total universe of N users, where $M < N$);
- Strong authentication credentials: Access to the Digital Vault requires a cryptographic token, which further increases authentication;
- Integrity: Guarantee that the information stored in the Digital Vault is certified and is not tampered with.

MAIN APPLICATIONS

The main applications of mVault are:

- Source code escrow;
- Document archive for notaries and law firms;
- Wills;
- Virtual data room.

12.



OST ONESTOPTRANSPORT



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www.ost.pt



Technology validation/
demonstration



IPN INSTITUTO PEDRO NUNES



SHORT DESCRIPTION

The OST platform is a digital platform for sharing Open Data information, applications and services oriented to the mobility area. It purports, and allows, to:

- Facilitate the creation of a transport ecosystem;
- Collect static and dynamic information from partner suppliers, namely mobility operators, by using international recommended standards - GTFS, GTFS-realtime, DATEX2 2.0 and POI W3C;
- Foster the development, by third parties, of applications and mobility services based on data from the platform. The platform has been successfully developed and tested in the scope of the Mobilizing TICE. Mobilidade project.



INNOVATIVE FEATURES

The platform consists of three different and complementary areas, which promote the establishment of a mobility ecosystem:

- The Applications Area works as a Web Store, where the applications developed by partners are available for free;
- The Partner Entities Area contains the information provided by the partners, which enables the platform usage;
- The Developers Area is intended to support the development of applications.

MAIN APPLICATIONS

The main applications of OST OneStopTransport are:

- Foster the availability and use of open data;
- Encourage the civil and academic communities to contribute with data and innovative and comprehensive applications / services;
- Foster the development of applications and mobility services based on data provided by third parties;
- Foster the commercialization of mobility services.

13.



PORTOLAN



Dognædis, a Prosegur Company



Paulo Morgado



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www.dognaedis.com



Technology commercialisation



SHORT DESCRIPTION

Portolan is a truly integrable enterprise security intelligence (ESI) platform, it is source independent, it has various correlation approaches and is proactive incident mitigation oriented.

Like its homonym - first globe map ever created - Portolan helps steering an organization from danger towards success. Being leveraged by real-time and cognitive analysis engines, Portolan becomes the most full-capable cyber intelligence platform for an effective incident response.

Capable of analysis focused not only in organizations but also on people, Portolan presents itself as a scalable platform that provides decision support for cyber security and cyber defense, based on OSINT, web, social networks, deep web and dark web monitoring.



INNOVATIVE FEATURES

Portolan shares three great values that make it rise between similar technologies:

- Integration, Independence and Pro-activity;
- Integration with modular design allows the platform to adjust the technological evolution and adapts to various types of existing platforms and protocols;
- Source independent on heterogeneous sources (ex: Social Media, IRC Networks, Monitoring systems);
- Pro-activity with it's goal to prevent security incidents through intelligence signals interpretation.

MAIN APPLICATIONS

The main applications of Portolan are:

- Abuse Channel automation ;
- IoCs gathering and correlation;
- Situation Awareness;
- Vulnerability exposure;
- Stream/Real-time Support;
- Advanced/Expert Event Tagging;
- Security Advisories Handling;
- Hacktivism monitoring;
- Advanced Event Correlation and Alarmistic;
- Standard Incident Taxonomy; (ENISA, EUROPOL and Portuguese National CSIRT Network);
- Automation and prioritization of cyber intelligence distribution;
- Stream-bot;
- Web-Dashboards.

14.



PRIMERCOG



**MediaPrimer - Tecnologias e
Sistemas Multimédia, Lda.**



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www.mediaprimer.pt



**Technology validation/
demonstration**



SHORT DESCRIPTION

primerCOG is a Web-based platform with a solid scientific background, suited to the healthy ageing of seniors and to their needs for stimulation, maintenance, monitoring and rehabilitation with respect to a number of neurodegenerative pathologies that affect the elderly. It targets two user profiles: the healthy profile (cognitively healthy older adults) and the mild profile (individuals with a medical diagnosis of neurodegenerative disease, e.g. mild cognitive impairment and Alzheimer's disease) and offers a series of activities targeted at occupational health that are geared to cognitive training of the memory, attention, executive functions, language and visual-spatial ability.

primerCOG has received from the Center for Neuroscience and Cell Biology (CNC) of the University of Coimbra all the scientific support necessary to guarantee the scientific quality of the platform.



INNOVATIVE FEATURES

The design and development of primerCOG have been performed by a wide team of professionals of neurosciences and experts in design, user interfaces, user experiences, information technology, behavioural analysis, analysis of experiments using IT systems, usability and accessibility. primerCOG sets out to be a useful tool for mental health specialists, psychologists, psychoanalysts and other professionals on applying therapeutic intervention programs for cognitive rehabilitation or maintenance.

MAIN APPLICATIONS

The main applications of primerCOG are:

- Pilot and demonstration projects: Test primerCOG with all user groups to assess the life quality improvement after using primerCOG and the adaptability of primerCOG to different cultural and social environments;
- Pilot projects - clinical validation: Assess the clinical effect of primerCOG and to provide indicators as to the efficacy of primerCOG in improving its users and in its proactive effect on cognitive decline.

15.



PRIMERCORE



**MediaPrimer - Tecnologias e
Sistemas Multimédia, Lda.**



José Carlos Teixeira



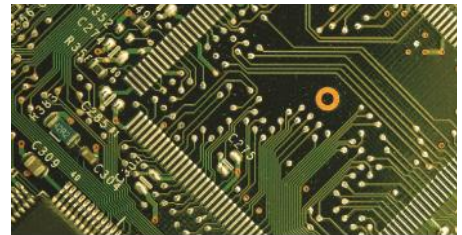
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Technology commercialisation



SHORT DESCRIPTION

The primerCORE platform supports the creation of vertical solutions adapted to the integrated management of georeferenced assets information with operational information related to processes, for several realms of activity (heritage assets, public sanitation, energy, street lighting...). These solutions can include automated processes to access information handled by third parties' systems and the installation of new remote monitoring and control systems. primerCORE is available in a single work environment that is intuitive and ergonomic, promotes integration of automatic processes, and the efficiency of management processes. primerCORE promotes the solving of problems stemming from the proliferation of solutions: inefficient access to useful and timely information, problems accessing and sharing information and knowledge, and difficulty in using performance indicators.



INNOVATIVE FEATURES

Key innovative features include:

- Distributed architecture based on open source solutions: relational database PostgreSQL, with the extension PostGIS, Elasticsearch and Neo4j;
- Single and aggregator data model able to support effective integrated management;
- Single intuitive and ergonomic work environment able to access all the information.

MAIN APPLICATIONS

The main applications of Citibrain are:

- primerSMART.CITIES: Integrated management of local authority information;
- primerAQUA: Integrated management of water and sanitation systems;
- primerASSETS: Integrated management of any kind of assets;
- primerPUBLIC.LIGHTING: Integrated management of municipal street lighting systems;
- primerEXTRACT: Integrated management of extraction/mining of natural products;
- primerAGRO: Integrated management of farms.

16.



REMOTE MONITORING SOLUTIONS



**ISA - Intelligent Sensing
Anywhere, S.A.**



Miguel Franco



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www.isasensing.com



Technology commercialisation



**Intelligent Sensing
Anywhere**



SHORT DESCRIPTION

The complex technology and advanced engineering systems developed by ISA allow fuel distributors can remotely monitor the level of the tanks to avoid stock ruptures. In order to offer this customer service, ISA has hardware such as c.Log, ISA core product. c.Log is a multi-purpose autonomous remote management system that provides data logging, automatic meter and dial reading and alarm triggering, and that can operate in extreme temperature environments, even in submerged ice and abnormal freezing conditions. The data collected by c.Log is saved in a cloud server, in order to be accessible by ISA own software apps or integrated into ISA customers ERP.



INNOVATIVE FEATURES

The technology incorporated on remote management equipment of ISA allows data recording, automatic meter readings and sending alarms via GSM/ SMS. ISA also used the CDMA on US, which allow a number of innovative services that no other technology provides. Nowadays, ISA is exploring new technologies such as SigFox, LoRa, 4&5G. ISA product has as main features an installation in less than 5 minutes, digital inputs, configurable alarms, maintenance-free and a software integration with ERP.

MAIN APPLICATIONS

ISA products have multiple applications: a remote tank level monitoring solution that provide to ISA customers the capacity to plan their deliveries upfront, reduce the number of trips and avoid run-outs of their customers. ISA has also an automatic meter reading solution that provides to ISA customers the ability to detect meter fraud and at the same time reduce the overall cost of meter readings. Also, bottle banks status can be monitored by a gas cylinder solutions.

17.



SAFECLOUD PHOTOS



HASLab / INESC TEC



Rui Oliveira



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yoursafecloud.com



Technology commercialisation



SHORT DESCRIPTION

SafeCloud Photos is a powerful photography mobile application that not only allows to take beautiful photos but also guarantees that they stay private at all times.

With SafeCloud, each photo is transformed and stored in several clouds in such a way that any of those clouds, individually, is not able to access the photo. Only the user can recover the photo and actually see it. The app was developed by the R&D unit HASLab, which integrates INESC TEC, and it is part of a major European project – SafeCloud.



INNOVATIVE FEATURES

SafeCloud differentiates from any other photo app in the market because:

- It uses at least two different storage services to store photos, guaranteeing that only the user can access them. The user no longer depends only on a storage service and takes advantage of the existing services to safely store its photos;
- It will sync to the user devices automatically. Only the user devices will be able to download the photos and he can install SafeCloud photos in all of them.

MAIN APPLICATIONS

SafeCloud is available for free for iOS and Android and be used by anyone who values great photos and safety.

18.



SECURITY SERVICES



NOS Comunicações



Maria João Cardoso



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www.nos.pt



Technology commercialisation



SHORT DESCRIPTION

Security services provided by NOS allow to deliver centralized security as a service, aggregating several cyber-attack mitigation solutions and giving the Corporate client the opportunity to choose the protection it may fit their needs.





INNOVATIVE FEATURES

Key innovative features include:

- Availability of several centralized solutions were the client may choose what fits better to their business needs and have total independence on their security management;
- Total alignment with other Telco services from NOS.

MAIN APPLICATIONS

NOS security services can be used in any applications which requires centralized security solutions.



19.



SEGURA



Altice Labs, S.A.



Business Development Team



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www.alticelabs.com

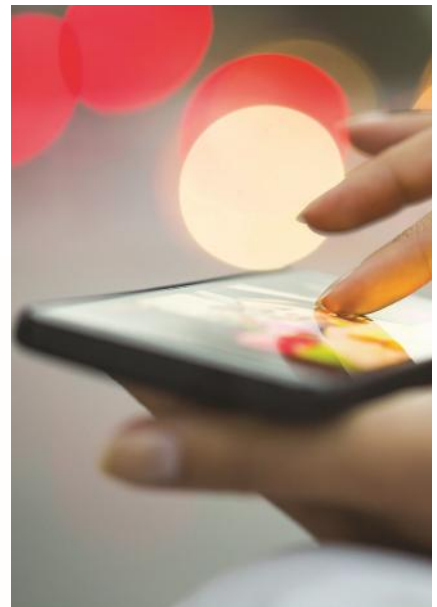


Technology commercialisation



SHORT DESCRIPTION

SEGURA is an electronic security system which allows access control, remote security management, integrated alarm management and real time events.





INNOVATIVE FEATURES

SEGURA is an integrated system that combines autonomous hardware control units and a Central Management system. It is an end to end solution enabling scenarios ranging from the straight forward access control to complex alarm and threat detection. Being scalable and flexible, it is ideal for small office as well as large enterprises with hundreds of buildings.

MAIN APPLICATIONS

SEGURA is ideal for:

- Infrastructure Managers;
- Hardware installers, access control operators and security professionals;
- Site Security Managers.

20.



SOOMA BUSINESS EMAIL



Vmuse Lda



Manuel Costa



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www.sooma.com



Technology commercialisation



SHORT DESCRIPTION

Sooma provides a secure cloud based email solution, provisioning a fully dressed reliable platform for companies exploring email as part of their service offering. Solution meets critical requirements for cost, performance and management.





INNOVATIVE FEATURES

Enhanced security and privacy with stellar performance tailored for easy integration with email service providers systems.

MAIN APPLICATIONS

Ubiquitous in every company's life, European IT providers have an option to include email security and privacy in their service portfolios.







R&D
institutions

01.



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www.centi.pt



Vila Nova de Famalicão, Portugal

CENTRE FOR NANOTECHNOLOGY AND SMART MATERIALS (CENTI)



SHORT DESCRIPTION

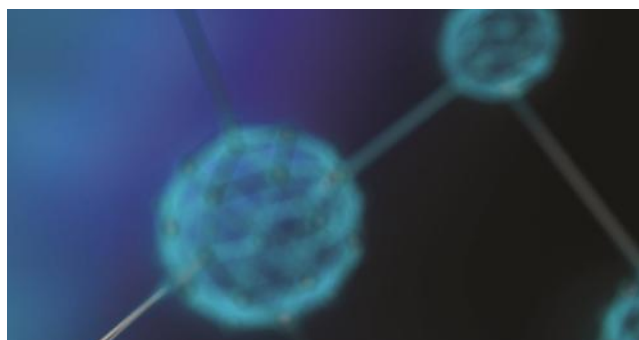
CeNTI is an institute for new technologies, founded in 2006 by CITEVE (Technological Centre for the Textile and Clothing Industries), University of Minho, University of Porto, University of Aveiro and CTIC (Technological Centre for the Leather Industry). Its role is to drive the development of new materials in order to contribute to product or innovation through all the necessary stages of development.

CeNTI provides, in a business to business approach, applied R&D, engineering and scaling-up production of innovative multicomponent fibres, smart materials/devices, multifunctional coatings and organic electronics and embedded systems.

KEY ICT COMPETENCES AND TECHNOLOGIES

CeNTI's R&D competences related to Smart Materials & Solutions are divided in 2 major programs: Embedded Systems & Electronics and Thin Films & OPV/OLEDs, which cover sensors-actuators, OPVs, OLEDs, supercapacitors, electrochromic devices and integrated systems. Some of the technologies used in CeNTI's Smart Materials & Solutions platform include :

- Polymer Multi Layer deposition at supersonic speed w/ E-beam;
- SMT (Surface Mount Technology) line (Pick&Place, dispensing and soldering);
- Thermal Evaporation Unit (150x150mm) for small molecules and metals;
- Pilot scale R2R Printing, Coating and Lamination system;
- Low temperature and Metal Evaporation technologies for processing OLED devices;
- SMT and PCB prototyping technologies.



SERVICES & RELEVANT PROJECTS

CeNTI services in sensors/actuators & other electronic devices field render the following reference outputs: engineering and design of systems & devices; small to medium batches of SMT (surface mount technology) prototypes; printed circuit board; heating bands; biometric sensors: temperature, heart-rate, motion and touchpads/keypads; Integrated gas sensors; applications software; wireless data communication to mobile platforms.

Some examples of relevant CeNTI projects in the ICT sector can be found below:

- Sensor Tile: Development of a switch ceramic tile with embedded electronics;
- TPLEDs: Development of a lighting decorative cushion with integrated flexible photovoltaics and LEDs;
- Digital Printing @ Textiles: Development of surface treatments for improvement of digital printing quality in textiles.

02.



João Nuno Oliveira
(Executive Director)



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www.ccg.pt



Guimarães, Portugal

CENTRO DE COMPUTAÇÃO GRÁFICA (CCG)



SHORT DESCRIPTION

The Center for Computer Graphics (CCG) was founded in 1993 and established at University of Minho in 2001, as a private and nonprofit research, development, training and consulting association, integrated in the Portuguese Scientific System. CCG dedicates its activity to applied research and development, in the fields of computer graphics, information, communication and electronic technologies, as well as to their application at national and international level.

CCG acts autonomously or in networks, as an "interface" between sources of knowledge (Universities) and economy (Companies), based on strategic partnerships – through projects and services – with knowledge transfer.

KEY ICT COMPETENCES AND TECHNOLOGIES

CCG has a wide experience in the implementation of several projects, developed around 4 key domains of applied research:

- CVIG: Computer Vision, Graphics and Interaction;
- EPMQ: Engineering Process, Maturity & Quality;
- PIU: Perception, Interaction & Usability;
- UMC: Urban and Mobile Computing.

CCG is equipped with edge technology infrastructures, including a Cave Automatic Virtual Environment, which supports CCG's activities and projects, in leading edge technology areas like simulation, automation, virtual reality and applied computer graphics in general.



SERVICES & RELEVANT PROJECTS

The solutions developed and the services provided by CCG to ICT companies and institutions have been oriented to multiple sectors of activity, including Health and Wellness, Industry and Retail.

Some examples of recent CCG projects in the ICT sector can be found below:

- Urban Probe - Urban spaces monitoring system based on computer vision;
- BUSCA: Bus Context Awareness;
- PT21: Shop of the future: Smart fitting room;
- HMIEXCEL - Advanced multimedia solutions for the automotive industry;
- MOSAIC 2B - Mobile Empowerment for the Socio-Economic Development in South Africa;
- Walkys - Footwear Virtual Try-On;
- Topic Shoe: Interactive kiosk for shoe stores and events.

03.



**Dirk Elias (Fraunhofer AICOS
Director)**



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**Lisboa, Portugal
Porto, Portugal**

FRAUNHOFER PORTUGAL



SHORT DESCRIPTION

Fraunhofer Portugal promotes and coordinates the cooperation between its research centers, other research institutions and industry partners, aiming at the creation of scientific knowledge capable of generating added value to its clients and partners, exploring technology innovations oriented towards economic growth, the social well-being and the improvement of the quality of life of its end-users. Currently, Fraunhofer Portugal operates one research center – Fraunhofer AICOS – located in Porto, Portugal. Fraunhofer Portugal AICOS focuses its activity in the area of assistive information and communication solutions, working with companies interested in outsourcing/co-developing their applied research projects.

KEY ICT COMPETENCES AND TECHNOLOGIES

Fraunhofer Portugal AICOS offers specialized competences centred on the following areas:

- Activity areas: ambient assisted living (AAL); information and communication technologies for development (ICT4D);
- Scientific areas: human-computer interaction; information processing; autonomic computing; application areas;
- Application areas: care, well-being & inclusion; mobile solutions for developing countries; multimedia & content; environment & energy awareness.



SERVICES & RELEVANT PROJECTS

Fraunhofer AICOS offers the following services: R&D consulting; proof of concepts; prototype implementation; easy access to german Fraunhofer institutes in other areas of competence.

Some examples of recent Fraunhofer AICOS projects in the ICT sector can be found below:

- OUTSIDE: Outage management system for improved distribution networks efficiency;
- EnAware: Domestic energy awareness;
- NST: Health sensor gateway demonstrator;
- S4S: Smartphones for smart seniors;
- WasteComm: Monitoring and management system for urban solid residue collection.

04.

INSTITUTO DE ENGENHARIA MECÂNICA E GESTÃO INDUSTRIAL (INEGI)



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Porto, Portugal



SHORT DESCRIPTION

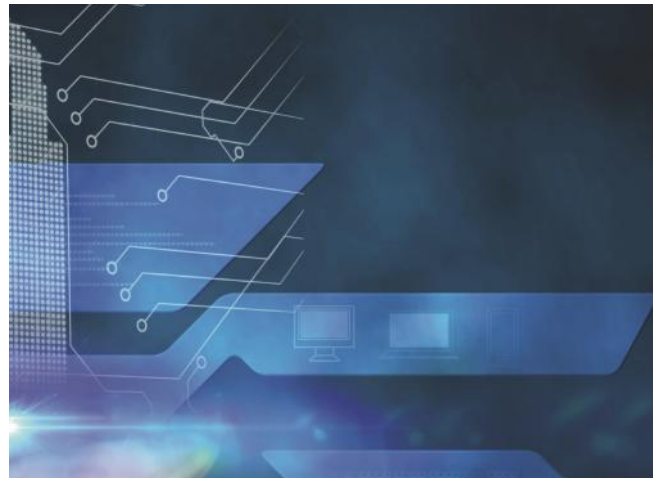
INEGI, founded in 1986, is a Research and Technology Organization (RTO), bridging the University - Industry gap and focused on applied research and development, innovation and technology transfer activities for the industry.

INEGI contributes to the increase of the competitiveness of the national industry, through research and development, technology transfer and training, in the fields of engineering design, materials, production technology, energy and environment and industrial management.

KEY COMPETENCES AND TECHNOLOGIES

INEGI has a set of scientific and technological expertise and competences which serve as the basis for its activities, amongst them: energy management, industrial and thermal energy; industrial management; industrial waste measurement and treatment, integrity and structural simulation; methodologies and tools for product development; new casting technologies; rapid prototyping and tooling; renewable energies; simulation of production processes; technical drawings and design.

INEGI is equipped with laboratories to carry out its experimental work, workshops for the development of components and pre-series, and a comprehensive set of tools to support engineering activity, and state of the art tools to work in wind energy, flow simulation of atmospheric and geographic information systems.



SERVICES & RELEVANT PROJECTS

INEGI is active in research, innovation and technology transfer, consultancy and services to a broad range of markets and activity sectors such as energy, metallomechanic, equipment and durable goods, automotive and transports, aeronautics, space and defence, sea economy, environment, public sector, services, health and many others.

The Institute has over 25 years of experience in projects with companies and national and international consortia.

05.

INSTITUTE FOR SYSTEMS AND COMPUTER ENGINEERING, TECHNOLOGY AND SCIENCE (INESC TEC)



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Porto, Portugal



SHORT DESCRIPTION

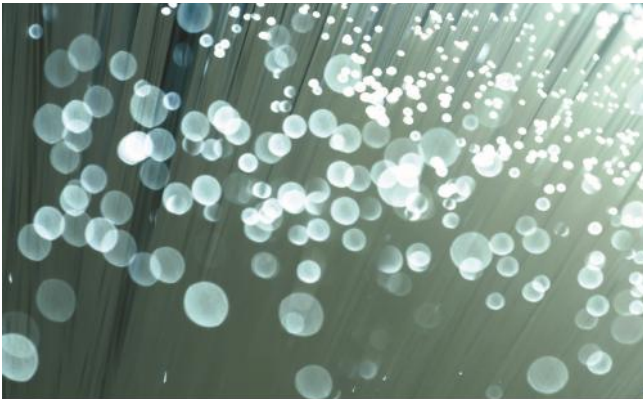
INESC TEC is an Associate Laboratory with more than 30 years of experience in R&D and technology transfer. INESC TEC was created to act as an interface between the academic world, the world of industry and services and the public administration in Information Technologies, Telecommunications and Electronics (ITT&E).

INESC TEC brings together more than 650 researchers, of which more than 270 have PhDs, forming a robust cluster with complementary skills and with notable international presence.

INESC TEC invests in scientific research and technological development, as well as in advanced training and consulting, technology transfer and supports the establishment of new technology-based companies.

KEY ICT COMPETENCES AND TECHNOLOGIES

INESC TEC incorporates 13 R&D Centres and one Associate Unit with complementary competences such as power and energy systems; telecommunications and multimedia; applied photonics; enterprise systems engineering; information systems and computer graphics; robotics in industry and intelligent systems; robotics and autonomous systems; innovation, technology and entrepreneurship; biomedical engineering research; artificial intelligence and decision support; advanced computing systems; industrial engineering and management; high-assurance software and real-time and embedded computing systems.



SERVICES & RELEVANT PROJECTS

INESC TEC offers cooperation and services in areas such as manufacturing & operations, technology transfer & spin off, sensing and micro-fabrication; information processing and pattern recognition; multimedia communication technologies; cryptography and information security; data mining; data analysis and statistical methods; modelling and optimisation.

06.



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Lisboa, Portugal

INOV INESC INOVAÇÃO



SHORT DESCRIPTION

INOV, founded in 1998, is a private nonprofit institution, dedicated to applied research, development and technology transfer, acting in the area of Information Technology, Electronics and Telecommunications (ITEC).

Due to its innovation and technological capacity, INOV occupies the position of an interface structure between knowledge-generation institutions and industrial entities, boosting the interactions and synergies between the various actors.

INOV accompanies its corporate customers in the identification of new projects, providing a full-scale support in order to guarantee that all the stages of the innovation process are assured since the definition.

KEY ICT COMPETENCES AND TECHNOLOGIES

The core INOV competences are grouped into four strategic areas and some examples of its key competences can be found below:

- Communications: integrated services digital networks, digital multiplexers and concentrators for commutation centres, mobile GSM/GPRS, UMTS networks, broadband and IP communications and QoS technologies;
- Monitoring, Navigation and Control: technologies for health services, navigation systems, forest surveillance and monitoring of fishing activities;
- Information Technologies: business and organisational engineering, information system architecture, configuration management and software testing, and system integration and computational prototyping;
- Electronics: embedded systems, product engineering, digital and analog electronics, fast electronics and fault tolerant systems.



SERVICES & RELEVANT PROJECTS

From the totality of solutions developed and provided at national and international level, some cases of especially recognized success can be found below:

- DECT voice & data, ATM, LAN / WAN, Switchgear and Terminal Equipment;
- IVRs: Interactive Voice Response Systems;
- Fleet Management and Navigation: Maritime (MONICAP System) and Terrestrial (XTran System);
- Forestry Surveillance (CICLOPE System);
- Communication Systems for People with Special Needs;
- Airport Management Systems.

07.



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Lisboa, Portugal

INSTITUTO DE TELECOMUNICAÇÕES (IT)



SHORT DESCRIPTION

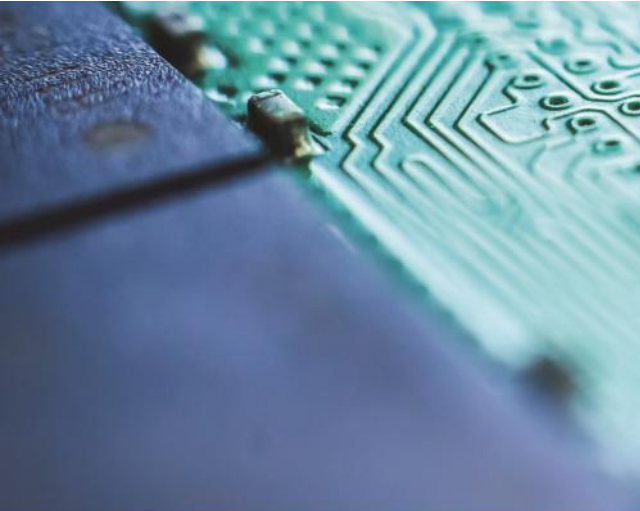
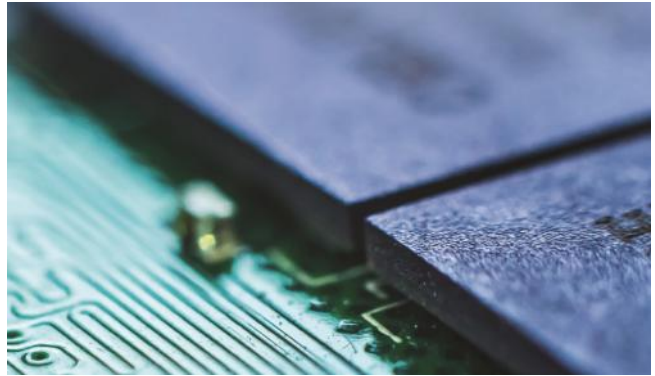
IT is a private, not-for-profit organization, actively involved in fundamental and applied research both at national and international levels in the field of Telecommunications.

Simultaneously it is committed to foster higher education and training, by hosting and tutoring graduate and postgraduate students. It also plays its role towards public society with public awareness initiatives, knowledge transfer to industry, and by providing consulting services on a non-competing basis.

KEY ICT COMPETENCES AND TECHNOLOGIES

Scientific expertise in IT, from which follow its main research and education activities, spans the following areas:

- Wireless Communications;
- Optical Communications;
- Networks and Multimedia;
- Basic Sciences and Enabling Technologies.



SERVICES & RELEVANT PROJECTS

Advanced laboratory facilities are available in most Scientific Areas of IT to support applied research, which is carried out in the framework of national and international projects in cooperation with similar research institutions worldwide.

Each year IT is involved in more than 170 projects, of which about 30 have European funding, obtained in a competitive basis.

IT also plays its role towards public society by producing and disseminating public awareness information, transferring knowledge to national and international industry and providing telecommunications consulting services on a non-competitive basis.

08.



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Coimbra, Portugal

INSTITUTO PEDRO NUNES (IPN)



SHORT DESCRIPTION

IPN is a private non-profit organisation which promotes innovation and the transfer of technology, establishing the connection between the scientific and technological environment and the production sector. Two of its RTD laboratories bring together a wide set of competencies and expertise in several areas of ICT.

The Laboratory of Informatics System (LIS) operates with a variety of industries, ranging from telecommunications to mobility and health.

The Laboratory for Automation and Systems (LAS) undertakes RTD and technology transfer activities in the fields of electronics, automation, robotics and instrumentation.

KEY ICT COMPETENCES AND TECHNOLOGIES

LIS acts in different technological areas such as mobile and ubiquitous computing, information systems, internet technology, databases, communications engineering, network security and reliability, among others. LAS operates in technological areas such as automation of industrial production lines; innovation and robotic implementation in industrial production lines; instrumentation and measurement; monitoring of processes using wireless instrumentation; identification and tracking through iButtons e SmartCards; systems development for supporting urban mobility; ehealth and quality of life; ambient assisted living.



SERVICES & RELEVANT PROJECTS

A short portfolio of LAS and LIS projects can be found below:

- Soul-fi: Startups optimizing urban life with future internet;
- INOVWINE: Innovation in wine and vineyard rows;
- TICE.Healthy: Health and quality of life systems;
- TICE.MOBILIDADE: User centered mobility systems;
- AGRISENSACT: A new generation of wireless sensors for integrated precise agriculture;
- Co-LIVING: Virtual collaborative social living community for elderly;
- N4C: Networking for communications challenged communities: architecture, test beds and innovative alliances.

09.



Carlos Maia (President)



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(headquarters)

INSTITUTO POLITÉCNICO DE CASTELO BRANCO (IPCB)



SHORT DESCRIPTION

IPCB is a public institution of higher education, whose corporate culture is characterized by the wealth that derives from the specific diversity of each one of its six schools (Agriculture, Applied Arts, Education, Management, Health and Technology).

The availability of a wide range of undergraduate and postgraduate academic degrees, the strong relationship with business, educational, social and cultural environment, the close link with the labour market and the transfer of knowledge and technology are integrated strategies aligned with the internationalization of the IPCB. This strategy is visible in the cooperation with more than 100 higher education institutions around the world, more than 200 international companies, ensuring high levels of employability, international mobility and international recognition.

KEY ICT COMPETENCES AND TECHNOLOGIES

The IPCB School of Technology provides expertise in Electrical and Telecommunications Engineering; Computer Engineering and Information Technologies and Multimedia. Its academic and R&D activities are developed in a well-equipped set of laboratories, including: networks laboratory - computer engineering; computer systems laboratory; systems and innovation laboratory; programmable systems laboratory, computational informatics laboratory; design and project laboratory, robotics and intelligent equipment laboratory, test laboratory; telecommunications laboratory; networks laboratory - electrical engineering; electronics laboratory; projects laboratory - electrical engineering.



SERVICES & RELEVANT PROJECTS

Some examples of ICT-related services provided by the IPCB can be found below:

- Geographic information systems;
- Computer network projects;
- Software development;
- Audiovisual production and multimedia;
- Technological modernization;
- Product improvement.

10.



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Leiria, Portugal

INSTITUTO POLITÉCNICO DE LEIRIA (IPLEIRIA)



SHORT DESCRIPTION

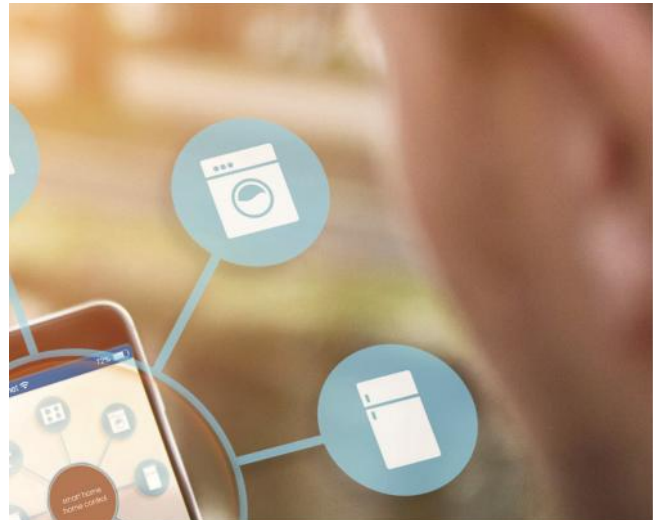
IPLeia started its activity in 1980 and is an innovative and entrepreneur Higher Education Institution with a dynamic and robust ecosystem of Research and Innovation strongly orientated to the economy and society. This ecosystem is composed of five higher schools, eighteen research units, one knowledge transfer centre, more than 130 laboratories and two scientific infrastructures.

IPLeia also participates actively in three business incubators, one business association, one technological centre, one technological park, four competitiveness and technology clusters, one business school, two regional energy agencies and one centre for scientific dissemination.

KEY ICT COMPETENCES AND TECHNOLOGIES

IPLeiria has three research units dedicated to the development of ICT, integrated in its School of Technology and Management (ESTG).

- Center for Research in Informatics and Communications (CIIC); scientifically structured around four main research areas, computational intelligence and optimization, communications and telematics, computer graphics and sound research, health informatics, with strong emphasis on applied research.
- Instituto de Telecomunicações (IT): IPLeiria Branch, whose two research groups focus on antennas and propagation, and multimedia signal processing.
- Institute for Systems Engineering and Computers at Coimbra (INESCC) - IPLeiria Branch, which focuses on several engineering sciences and in management science/operations research within a systems engineering approach.



SERVICES & RELEVANT PROJECTS

The ESTG and its associated research units are strongly committed to advanced learning training, provision of techno-scientific consulting services to public and private entities and other services to the community. This is proven by the many projects and partnerships that the school has established, mainly with companies from Leiria, but also with national and international universities and economic agents, as well as by the spin-off companies created.

11.



Rui Alberto Martins Teixeira



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Viana do Castelo, Portugal

INSTITUTO POLITÉCNICO DE VIANA DO CASTELO (IPVC)



SHORT DESCRIPTION

Founded in 1980, IPVC is a regional institution, whose aims is a qualified human, cultural, scientific, technical and professional training, to carry out necessary research to accomplish its mission and to cooperate with the regional community of Alto-Minho, particularly with its productive and entrepreneurial sectors. IPVC is composed by six Schools, including the School of Technology and Management (in the ICT field), which offer undergraduate and postgraduate degree courses, these last very often in collaboration with national and international polytechnics and universities.

The Office of Technology, Innovation and Knowledge Transfer (OTIC) is one of the most visible faces of the enormous effort that is the IPVC is developing for the embodiment of business and regional community into an international level.

KEY ICT COMPETENCES AND TECHNOLOGIES

The School of Technology and Management offers a range of expertise in the fields of computer networks and systems, computers and electronic systems, technologies and programming of computer systems, technologies and management of computer systems, electronic engineering and computer networks, and informatics engineering.



SERVICES & RELEVANT PROJECTS

IPVC, through the OTIC office, provides the following services:

- Support for the development and project management R & D + Innovation;
- Knowledge-based services to the community;
- Support for business creation;
- Support for intellectual property;
- Innovation diagnostic development.

12.



António Fidalgo (Rector)



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Covilhã, Portugal

UNIVERSIDADE DA BEIRA INTERIOR (UBI)



SHORT DESCRIPTION

UBI is a public university, created in 1979, which currently hosts more than 6.000 students spread across five faculties – Arts and Letters, Sciences, Health Sciences, Social and Human Sciences, Engineering. The Departments of Informatics Engineering (DI) and Electromechanical Engineering (DEM), integrated in the Faculty of Engineering, hold strong valences in the fields of informatics engineering, information and technological systems, and also computer electronic engineering. The Coordinator Institute of Research (ICI) integrates the UBI Research Units which include the two ICT-related research units, namely the Electromechatronic Systems Research Centre (CISE) and the Instituto de Telecomunicações (IT) – Covilhã Branch.

KEY ICT COMPETENCES AND TECHNOLOGIES

DI hosts several specifically-themed research units, such as ALLAB - Assisted Living Computing and Telecommunications Laboratory, NetGNA - Next Generation Networks & Applications Group, NMCG - Network & Multimedia Computing Group, Release - Safe and Trusted Computing, ReGain - Virtual Reality & Gaming Group, Socialab - Soft Computing & Image Analysis Group. IT - Covilhã develops its research activities in the following topics: computer graphics and multimedia; mobile technologies and telecommunications; network and multimedia computing; soft computing and image analysis; next generation networks and applications; applied mathematics; power systems. These units are well equipped with laboratory and research structures to support its teaching and research activities, in close connection to society and to the business world. Research facilities include high-performance networks, network servers, computer clusters running grid and cloud technologies and several high-end graphics workstations and PCs.



SERVICES & RELEVANT PROJECTS

In order to enhance the link between the academic community and civil society, UBI provides several types of services to the community. Companies can resort the various university departments for consulting, advice or request / offer applied research.

UBI also establishes partnerships with companies to provide support in the development of new products and services with a strong component of technological and scientific innovation.

13.



**Manuel António Assunção
(Rector)**



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Aveiro, Portugal

UNIVERSIDADE DE AVEIRO (UA)



SHORT DESCRIPTION

UA was created in 1973, and is a public foundation under private law which continues to develop and implement its mission to provide undergraduate and postgraduate education and to generate research and promote cooperation with society. Attended by about 15,000 students, UA has achieved a significant position amongst higher education institutions in Portugal, being one of the top universities regarding the quality of its infrastructures, the strength of its research and the excellence of its staff.

The Department of Electronics, Telecommunications and Informatics hosts two Research Units, EETA, the Institute of Electronics and Telematics Engineering of Aveiro and the Institute of Telecommunications (IT) - Aveiro branch.

KEY ICT COMPETENCES AND TECHNOLOGIES

IEETA is a Computer Science and Engineering / Electronics and Electrical Engineering research unit with 50 PhD integrated members. It is organized in three groups, the biomedical informatics and technologies group, the intelligent robotics and systems group, and the information systems and processing group, mapping the major scientific areas of activity of its researchers.

The IT - Aveiro branch develops its research under the following thematic areas: applied mathematics, embedded systems, integrated circuits, mobile networks, mobile systems, network architectures and protocols, optical communications and photonics, radio systems, telecommunications and networking, wireless circuits.



SERVICES & RELEVANT PROJECTS

Research at the UA promotes innovative products and solutions, contributing to the advance of science and technology. It is a privileged partner for companies and other national and international organisations with which it cooperates on numerous projects and for which it provides important services. Both IEETA and IT - Aveiro branch have a vast experience in joint projects with the industry, some of them resulting in the creation of spin-offs and start-ups, patents and trademarks, both national and international, and a number of products that have been licensed and are in use by the industry.



14.



**Prof. Doutor Luís José Neves
(Director)**



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Coimbra, Portugal

UNIVERSIDADE DE COIMBRA - FACULDADE DE CIÊNCIAS E TECNOLOGIA (FCTUC)

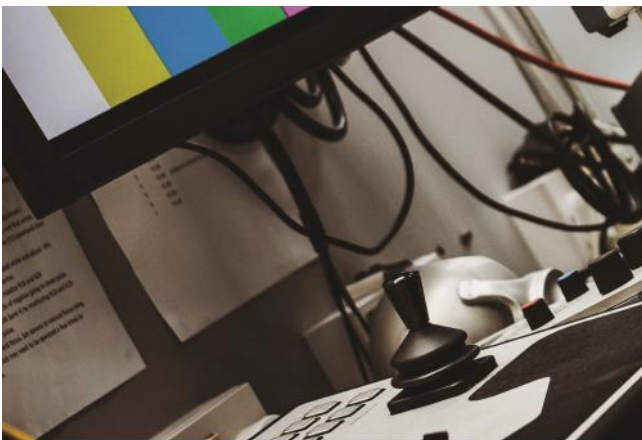
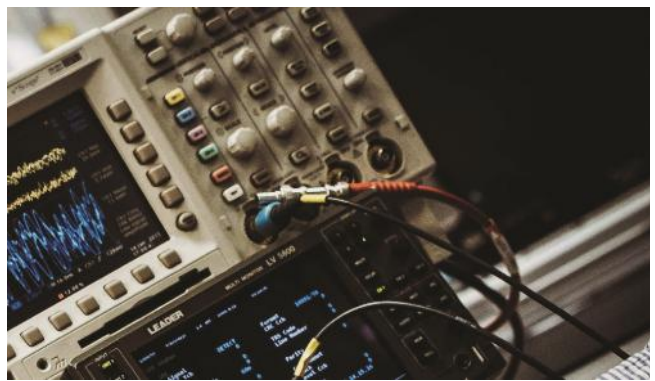


SHORT DESCRIPTION

FCTUC is the major faculty within the University of Coimbra, comprising two different units dedicated to ICT-related activities, namely the Department of Electrical and Computer Engineering (DEEC) and the Department of Informatics Engineering (DEI). These units produce world level research in the core areas of electrical and computer engineering, energy systems, electronic and computer systems, automation and robotics, telecommunication systems, and also informatics and software engineering and design and multimedia. FTUC also integrates different ICT R&D centres and associated units, such as the Institute for Systems Engineering and Computers at Coimbra, the Centre for Informatics and Systems of the University of Coimbra, Institute of Systems and Robotics—University of Coimbra, the Pedro Nunes Institute and the Instituto de Telecomunicações.

KEY ICT COMPETENCES AND TECHNOLOGIES

Through its various R&D centres and units, the FTUC has acquired profound expertise in a vast array of areas concerning ICT, such as in mobile computation; information systems; internet technologies, OLAP e datamining; communications engineering; security and reliability in systems and networks; intelligent systems; remote training; mobile autonomous robotics; intelligent transportation systems; computer vision; medical robotics; assistive technologies; advanced industrial automation technologies and intelligent energy systems.



SERVICES & RELEVANT PROJECTS

The FCTUC R&D centres and associated units explore ICT in the following areas:

- Conception, development, integration and operation of technological solutions;
- National and international partnerships on R&D projects;
- Entrepreneurial promotion and support to technology based spin-off companies;
- Special training (projects, internships and technology seminars);
- Support to corporations in both national and European Union programs;
- Technology prospecting and innovation;
- Professional advice and auditing.

15.



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Braga, Portugal

UNIVERSIDADE DO MINHO (UMINHO)



SHORT DESCRIPTION

Founded in 1973, UMinho is renowned for its competence and quality of teaching staff, excellence in scientific research, wide range of undergraduate and graduate courses offered and for its high level of interaction with other institutions. Located in the north of Portugal, UMinho has a campus in Braga and other in Guimarães.

UMinho has a very strong connection to local businesses, the region and the country's territory. UMinho establishes itself as a complete university, which is able to take on projects, with both direct funding from business and large mobilising projects and to a high degree of success and size.

KEY ICT COMPETENCES AND TECHNOLOGIES

The ICT-related research and development activities are carried out by two groups integrated in the School of Engineering:

ALGORITMI develops R&D activity in information and communications technology and electronics, spreading into four major fields: electrical engineering, electronics and nanotechnology; operations research, statistics and numerical methods; information systems, software and multimedia; communications, computer networks and pervasive computing.

HASLab is anchored on a rigorous approach to three areas of computer science: software engineering, distributed systems and cryptography and information security. It designs and implements high-assurance software systems, software that is correct by design and resilient to environment faults and malicious attacks.



SERVICES & RELEVANT PROJECTS

The cooperation between UMinho and local, national and foreign industries, local authorities, and public and private entities is usually developed through direct contact with its research centres and public or private interface organisations.

UMinho keeps this type of activity in high priority, which allows ensuring an understanding of the evolution of social needs, integrating graduates in business and selecting relevant national development topics to research. This activity covers testing and consulting, audits, research and development aimed at the development of products or technologies, technology transfer or intensive training programmes.

16.



**Sebastião Feyo de Azevedo
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Porto, Portugal

UNIVERSIDADE DO PORTO (U. PORTO)



SHORT DESCRIPTION

Founded in 1911, U. Porto is a benchmark institution for higher education and scientific research in Portugal, and one of the top 200 European universities according to the most relevant international ranking systems.

U. Porto is committed to converting into social assets the talent and innovation from its 14 faculties, one business school and over 50 research centres. The impressive volume and quality of knowledge produced by U. Porto owes a great deal to the heavy investment in laboratories and state-of-the-art equipment, coupled with a highly skilled scientific corps.

KEY ICT COMPETENCES AND TECHNOLOGIES

The Departments of Informatics Engineering and Electrical and Computer Engineering (Faculty of Engineering) and the Department of Computer Sciences (Faculty of Sciences), as well as research centres such as the Research Center for Systems and Technologies (SYSTEC), the Artificial Intelligence and Computer Science Laboratory (LIACC), the Laboratory of Artificial Intelligence and Decision Support (LIAAD), Institute of Telecommunications (TI) and INESC Technology and Science (INESC TEC), promote R&D in the areas of informatics engineering, computer and electronics engineering, computer sciences and network and information systems engineering.

They gather key competencies in fields such as: software engineering, human-computer interaction and multimedia, intelligent systems, information management system, algorithms and computing complexity, encryption and security, data mining, artificial intelligence, and networks and communications services.



SERVICES & RELEVANT PROJECTS

Through U.Porto Innovation, a technology transfer office, and other similar structures on campus, U. Porto works with companies to identify opportunities for R&D and innovation, to create value for businesses through R&D+i services, and to build partnerships with the scientific community for the development of joint projects.

The Science and Technology Park of the University of Porto (UPTEC) is a crucial link in this chain of cooperation. UPTEC has already supported the development of more than 150 companies notable for their high degree of innovation, technological intensity, expertise and potential for internationalisation.



17.



**Prof. Doutor Fernando Santana
(Dean)**



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Lisboa, Portugal

UNIVERSIDADE NOVA DE LISBOA - FACULDADE DE CIÊNCIAS E TECNOLOGIA (FCTUNL)



SHORT DESCRIPTION

FCTUNL is one of the most prestigious Portuguese engineering and science public schools. The entrepreneurial drive of the students and graduates of FCTUNL has led to many successful spin-offs that transfer knowledge to the market and help create value and social impact. FCTUNL hosts two R&D centres dedicated to ICT:

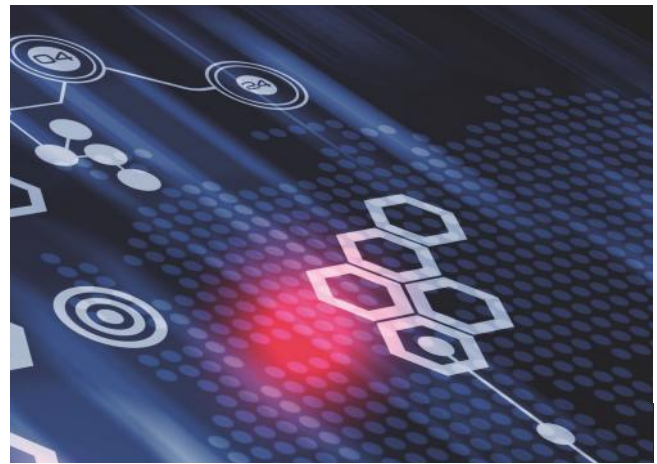
CTS - Centre of Technology and Systems: micro and nanoelectronics, signal processing and embedded systems; energy efficiency, intelligent control and industrial systems; collaborative networks, distributed systems, interoperability and decision based systems;

NOVA LINCIS - NOVA Laboratory for Computer Science and Informatics: computer systems; knowledge-based systems; multimodal systems; software systems.

KEY ICT COMPETENCES AND TECHNOLOGIES

The CTS teams focus on microelectronics, materials & processes, telecommunications and reconfigurable and embedded systems; energy efficiency, industrial and intelligent control and decision support systems; collaborative networks and intelligent decision based systems. CTS has four core labs: micro/nano-electronics design; nanophysics & nanotechnology for energy; novaflex manufacturing cell and micro/nano-electronics processes.

The NOVA LINC3 team is internationally recognized by its high impact results in themes such as distributed dependability and data management, software modeling and requirements engineering, programming and verification languages and systems, knowledge representation and non-monotonic reasoning, multimedia information processing and interaction.



SERVICES & RELEVANT PROJECTS

Some examples of recent FCTUNL projects in the ICT sector can be found below:

- MobiS: Personalized mobility services for energy efficiency and security through advanced artificial intelligence techniques;
- ProaSense: The proactive sensing enterprise;
- COGNITUS: Converging broadcast and user generated content for interactive;
- Reversible Computation: Extending horizons of computing.





Our
associates

Our Associates



Active Space Technologies
www.activespacetech.com
 Coimbra



AEVA - Associação para a Educação e Valorização da Região de Aveiro
www.aeva.eu
 Coimbra



AIDA - Associação Industrial do Distrito de Aveiro
www.aidapt
 Coimbra



Altice Labs
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 Aveiro



AMBISIG
www.ambisig.com
 Lisboa



ANETIE - Associação Nacional das Empresas das Tecnologias de Informação e Electrónica
www.anetie.pt
 Porto



ANJE - Associação Nacional de Jovens Empresários
www.anje.pt
 Porto



ARTICA
www.artica.cc
 Caparica



Associação Portuguesa de Imprensa
www.apimprensa.pt
 Lisboa



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IN - Invisible Network - Associação para o Desenvolvimento da Computação Invisível
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ISA - Intelligent Sensing Anywhere, S.A.
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ITEAMPLE, A.C.E.
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