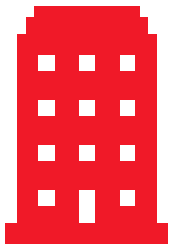# Lasaris – Lab Software Architectures and Information Systems

Tomáš Pitner, Bára Bühnová

Heads of Lab

Lasaris **Origin and History**

History

Established in **2009**

Own premises since **2010**

Located at Botanicka 68a, Brno

Teaching

Programming (basic, enterprise, mobile – Java, C#, C, Ruby, XML)

Development methods (OO, quality, architectures, agile, process management)

Soft skills (team work, communication)

Critical infrastructures, **cyberphysical** systems

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Lasaris **Mission**

- **Lab of Software Architecture and Information Systems**
- theoretical and practical problems related to the development of **large secure and reliable software systems**;
- R&D projects in the field of **critical infrastructures**, such as **smart grids, smart transportation** and **smart cities**;
- visualisations for **education and training**.

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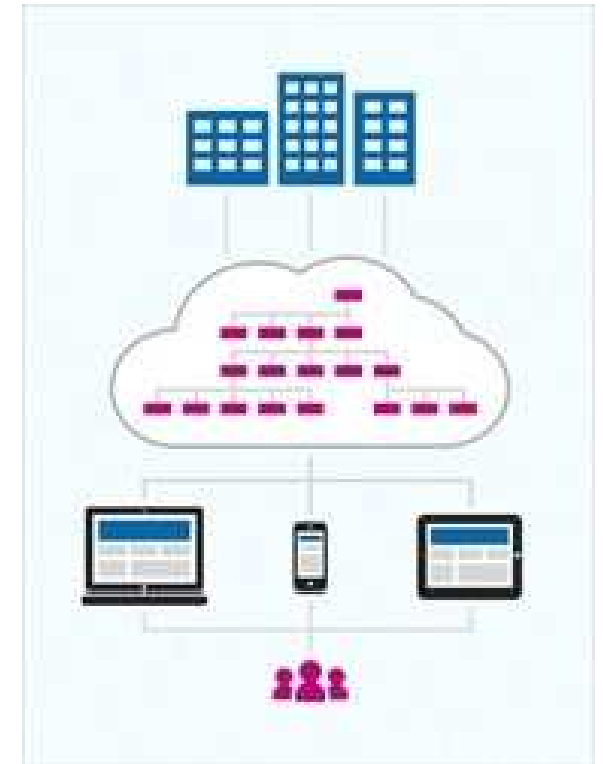
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Lasaris **Research Approach**

- **Complex** Problems from Reality
- **Combining Methods** from Computer Science and other Disciplines (law, sociology, management, services)
- Usually have a „**Customer**" who can validate what we do
- **Collaboration** is the Key

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Lasaris **Major Research Projects**

- **C4e**
- **Smart Grids**
  - **TAČR SecureFlex**
  - **TAČR National Center of Competence NC3**
- **KYPO** Cyber Range Platform
  - **SABU** finished
  - **KYPO II, III**
- **PostDoc@MU**
- **EU Horizon** projects
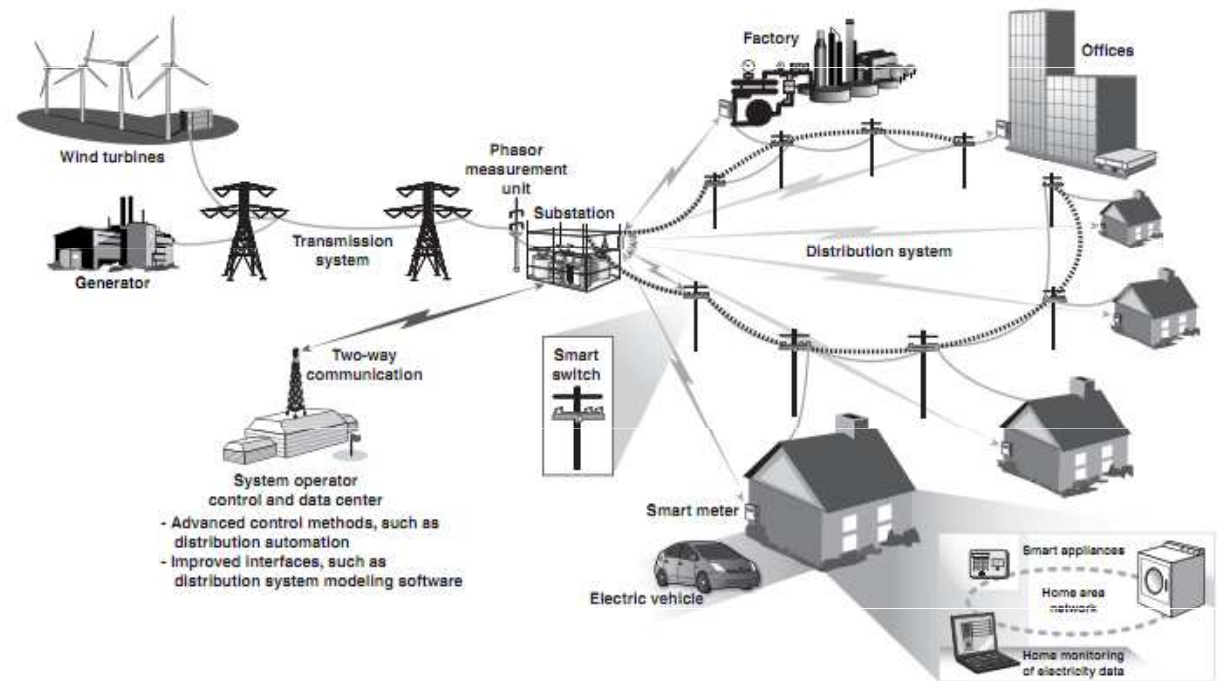 - **Concordia** finishing
  - **RES-Q+** starting

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Lasaris **Smart and Critical Infrastructures**

– Domains
  – **Smart grids**
  – **Smart buildings**
  – **Smart cities**
  – **Internet of Things**
– Research
  – **Monitoring and control**
  – **Architecture design**
  – **Modeling and simulation**
  – **Visualization**
  – **Big data**
  – **Cloud computing**
  – **Cyberphysical systems**

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Lasaris **Values**

- **Scientific performance** combination of publication/citation/IF-based metrics & applied project impact (large applied projects for/with industry)
- **International visibility** long-term broad contacts through Czech Cybercrime, Cybersecurity Center of Excellence (C4e): Uni Vienna
- **Open culture** international colleagues since 2012 (AT, IT, RS, DE, ZA, UA and many more), space for young scientists, gender diversity
- **Societal outreach** Czechitas, Central European and International Olympiads in Informatics, student seminars, Summer Schools
- **Popular science** Researchers' Night, Open Days

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Lasaris **Seminar** – Talks

- Tutorial-like: quick insight into an area
- Preparation: quick feedback from lab community
- Guest: broader context of our research and collaboration (incl. industry)

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