OPC-UA **LADS**:
Laboratory and **A**nalytical **D**evice **S**tandard

A new standard for the smart laboratory

Why LADS?

- Efficient networking of machines, automated systems and processes is the key to securing advantages in an increasingly competitive laboratory market
- Study by McKinsey: up to 50% of costs can be cut and up to 70% savings achieved in terms of delivery times through digitalization and automation in quality laboratories
- Interdisciplinary and cross-company SPECTARIS 'Networked Laboratory Equipment' working group promotes the standardization of interfaces in laboratories to serve the industry
- Objective of the working group: creation of a manufacturer-independent open standard, which comprehensively takes on board the requirements of various branches, disciplines and business processes, and is sustainable and adaptable to future requirements in the field of digitalization and automation.

Why OPC-UA

- OPC-UA has established itself as the worldwide standard in industrial automation and the process industry
- More than 750 reputable manufacturers subscribe to this standard, which is embedded in thousands of products supporting OPC-UA
- Result: OPC-UA is well-defined, very highly adaptable, proven in practice and the focus of ongoing further development
- Encompasses aspects, such as cyber-security,

  which are only now entering public consciousness

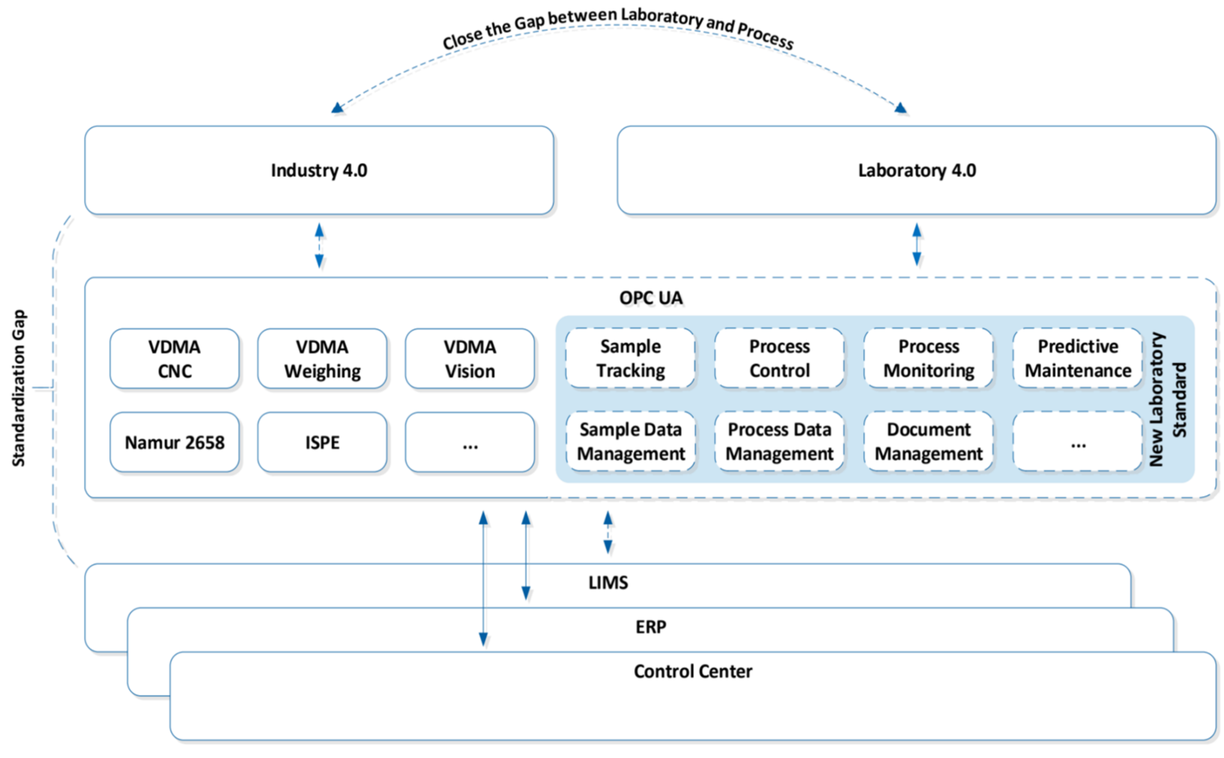

Figure 1: Integration of LADS in the OPC-UA environment

What is OPC-UA LADS about?

- Official OPC-UA JWG working on a companion specification offering a tool- and ruleset to create digital twins of laboratory and analytical devices based on OPC-UA

Who is involved?

- OPC-UA LADS JWG (joint working group) : OPCF, VDMA, SPECTARIS, JAIMA, GAMBICA, LABMAS, FHI & more

Our motivation:

- A common interface unified, robust & secure to drive digital transformation in the lab space for users, application developers and device manufacturers

This and more is “in it” for...

…the device manufacturer:

- Security built-in
- Platform independent
- OPC-UA is de-facto standard for Industry 4.0
- Highly accepted by relevant customers

…the application developer:

- Don’t waste time implementing proprietary drivers and focus on your users problems
- Enable your application to be compatible to a massive base of devices

…the lab operator:

- Cut down on integration costs
- Data integrity and audit trail built in
- Experience real P’n’P of devices

Roadmap, achievements and additional activities

- OPC-UA LADS is an official joint working group (JWG) currently working on the writing of a companion specification (CS)
- LADS*hack*: conducting hackathons
- LADS*urc*: a user review committee
- Marketing activities: participation in trade shows and events of the industry

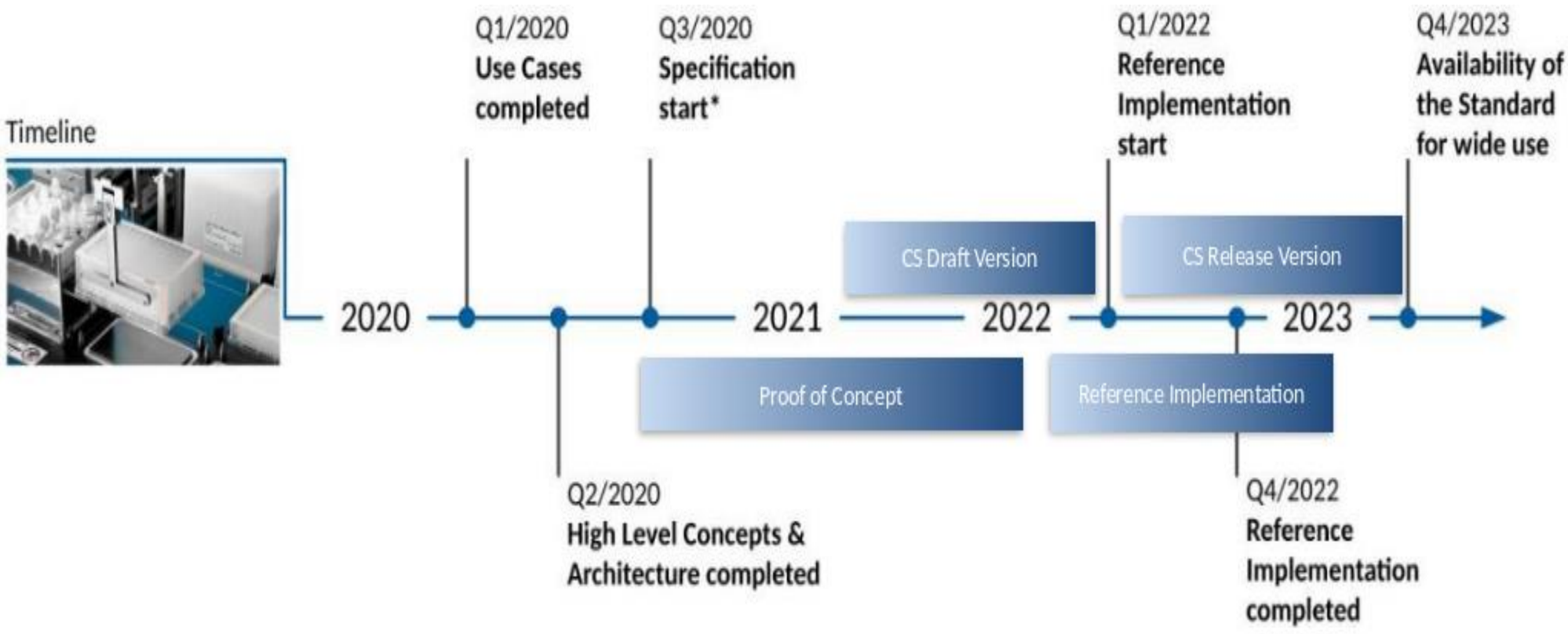

Figure 2: Schedule for implementation of OPC-UA LADS

* SPECTARIS members are included fromthis point onwards.

Thanks to our supporters - founding members & supporting companies:

SPECTARIS German Industry Association for Optics, Photonics, Analytical and Medical Technologies

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Want to participate?

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