



" Telemonitoring and Telemedicine for Hospitals Assisted by ICT for Life saving co-morbid patients in Europe As part of a Patient personalised care program of the EU "

Work Package 6

Deliverable 6.1.

Project dissemination Publications and meetings according communication and dissemination plan

Ppt_ THALEA presentation deck 2015

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Introduction to Thalea

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Thalea stands for:

Telemedicine system to meet the demands of

Hospitals concerning early warning

Assisted by innovative ICT for

Life saving co-morbid patients in

Europe

As part of a patient personalised care program

Thalea is funded by the European Union as part of the Seventh framework programme (FP7-ICT-611855).

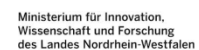
- Thalea aims to save lives by developing software that enables Intensive Care Units to improve the care for acutely live-threatened patients by telemedicine and telemonitoring.
- In addition Thalea is also a pilot project for a new type of tender procedure: pre-commercial procurement (PCP).

Introduction to Thalea

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Eight partners collaborate on this project:

- University Hospital RWTH Aachen (Germany)
- Oulu University Hospital (Finland)
- Parc Taulí Sabadell University Hospital (Spain)
- Maastricht University Medical Center (Netherlands)
- East Limburg Hospital (Belgium)
- Catalan Agency for Health Information, Assessment and Quality (Spain)
- Ministry of Economic Affairs (Netherlands)
- Ministry of Innovation, Science and Research of the State of North Rhine Westfalia (Germany)



Introduction to Thalea

The Thalea advisory board consists of representatives of the following organisations:

- Finnish ministry of employment and economy
- IQmed, Frankfurt a.M
- ZENIT GmbH
- Cluster MedizinTechnik.NRW
- DLR, Köln
- Techniker Krankenkasse, TKK
- Enterprise Europe Network EEN
- Zentrum für Telematik im Gesundheitswesen
- Nictiz - the National IT Institute for Healthcare in the Netherlands

Why Thalea?

Thalea's primary goal is to save lives in ICU-care by creating a technologically advanced cockpit in which a team of doctors can remotely support and advise various intensive care units.

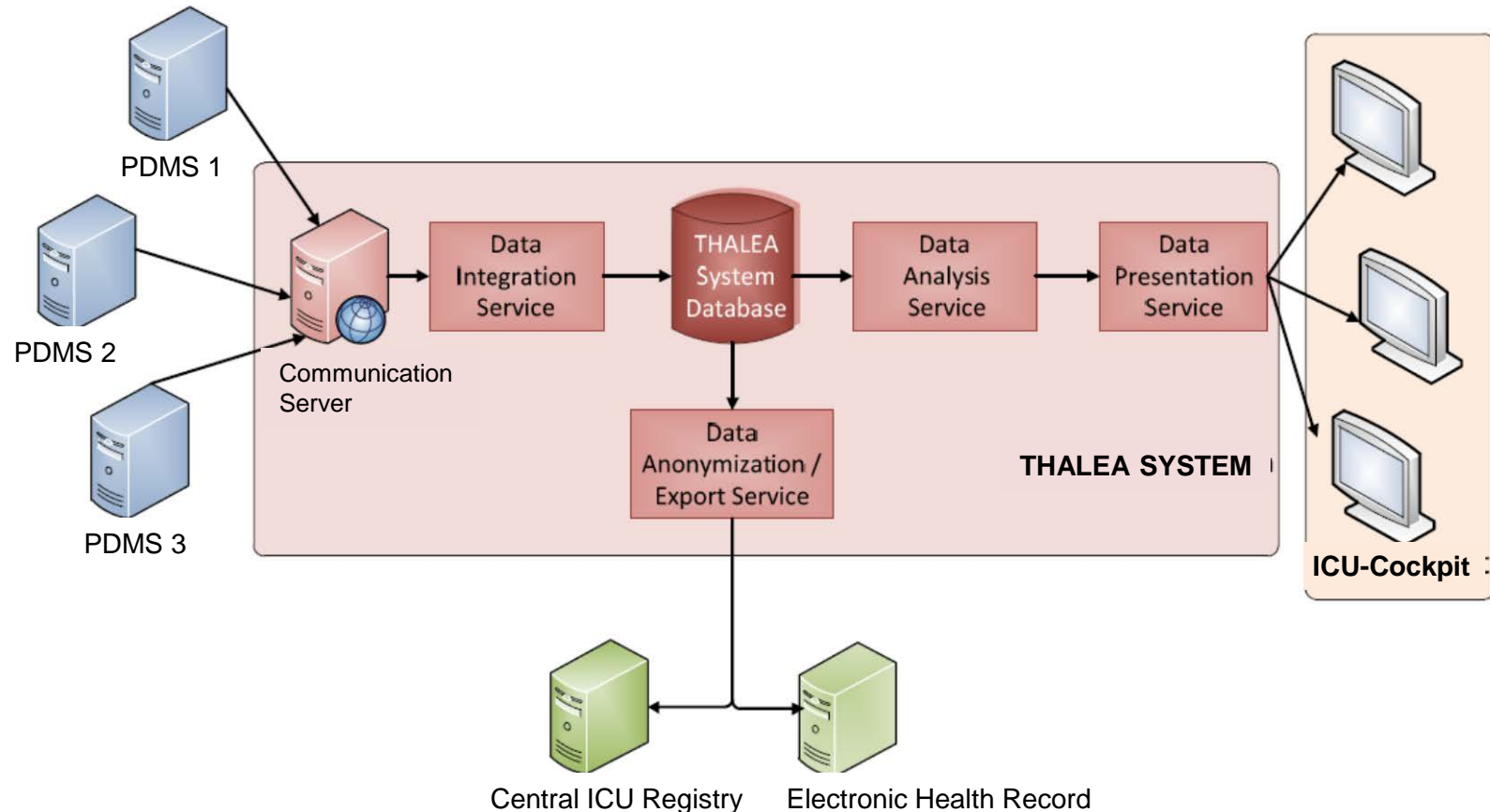
This will lead to:

- Earlier detection of deterioration, earlier intervention and more lives saved
- Pattern recognition
- Tracking workflows thus improving compliance
- Standardization of ICU-registry

The Thalea system

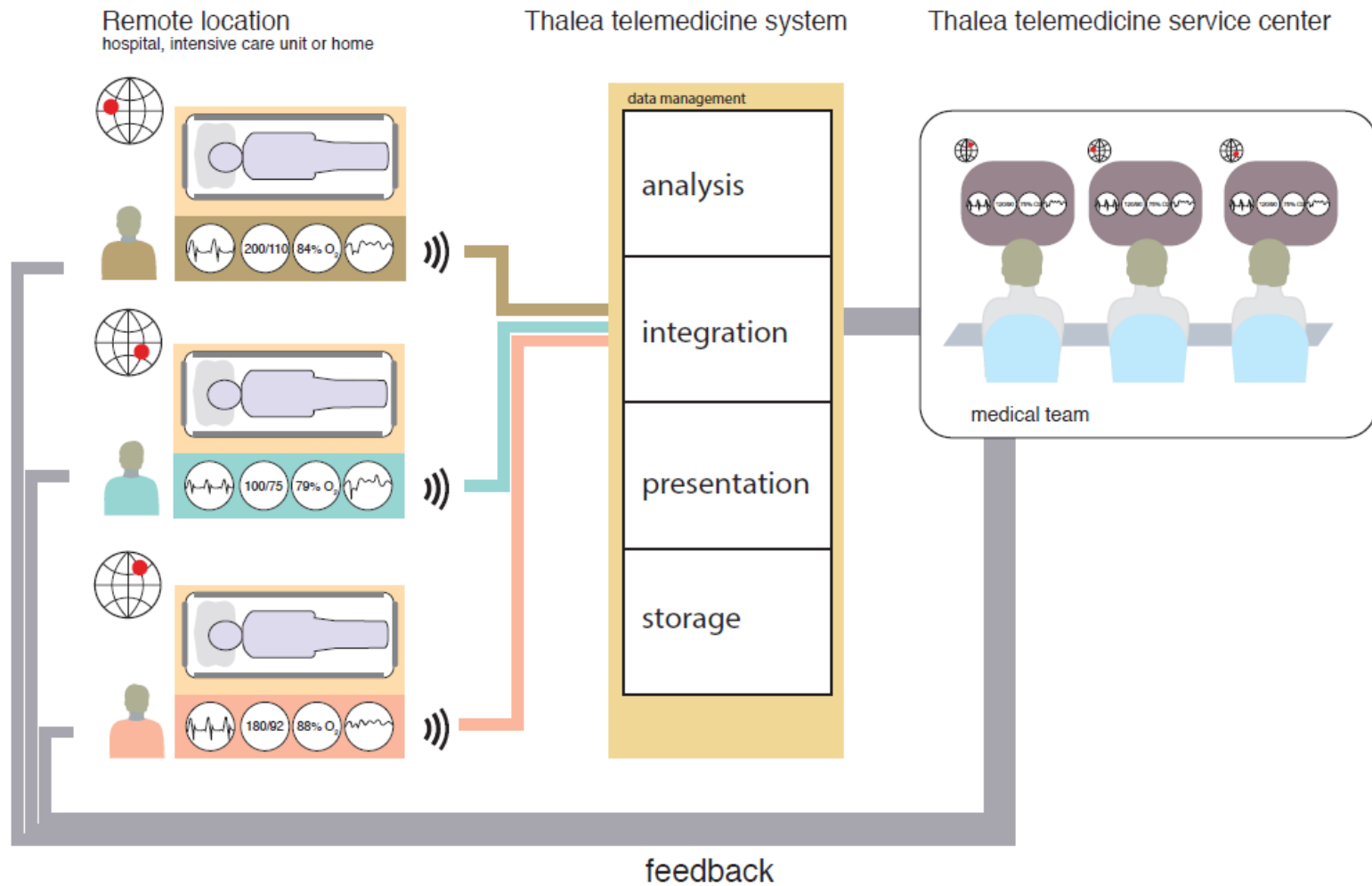
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Schematic overview of the Thalea cockpit system



The Thalea system

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The Thalea system

Focus areas Thalea cockpit system:

- Compatibility with patient data management systems already in use in ICUs
- High level of interoperability
- Scalability
- Manufacturer independency
- Enabling remote consultation regionally with telemedicine solutions
- Early detection of ICU patients at increased risk
- Effective resource utilization and real-time resource management

Results telemedicine in ICU

Telemedicine improves ICU outcomes; a meta-analysis:

- Significant 20 % decrease in ICU mortality
- Decrease in hospital mortality by 16 %
- Significant decrease in ICU length of stay (mean difference 1.26 days)
- Decrease in length of hospital stay (mean difference 0.64 days)

This was achieved by:

- More rapid availability of an intensivist consultation
- Timely use of performance data
- Better adherence to ICU best practices
- Quicker alert response times
- Regular multidisciplinary patient rounds

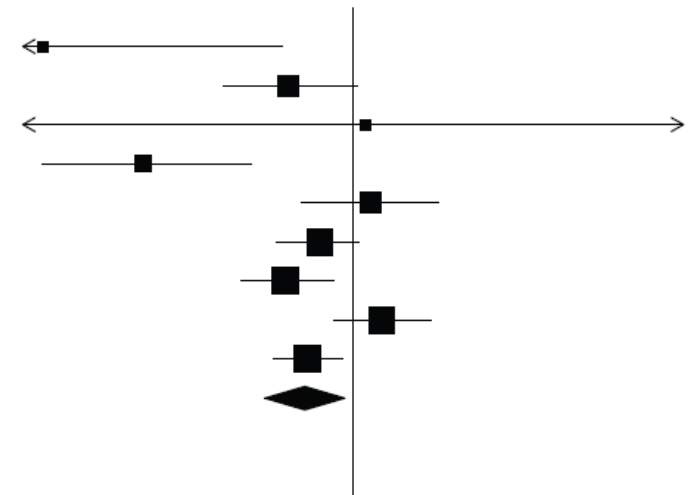
Lilly CM ym. CHEST 2014;145: 500-7

Results telemedicine in ICU

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Study	Telemedicine		Control		Weight	Risk Ratio
	Events	Total	Events	Total		[95% CI]
ICU mortality						
Rosenfeld et al., 2000	3	201	29	427	2.4%	0.22 [0.07, 0.71]
Breslow et al., 2004	47	744	120	1396	12.6%	0.73 [0.53, 1.02]
Marcin et al., 2004	1	47	5	249	0.8%	1.06 [0.13, 8.87]
Kohl et al., 2007	81	2622	16	189	8.2%	0.36 [0.22, 0.61]
Vespa et al., 2007	70	640	58	578	12.5%	1.09 [0.78, 1.52]
Thomas et al., 2009	165	2108	188	2034	16.2%	0.85 [0.69, 1.03]
McCambridge et al., 2010	110	959	151	954	15.3%	0.72 [0.58, 0.91]
Morrison et al., 2010	208	2717	91	1371	15.1%	1.15 [0.91, 1.46]
Lilly et al., 2011	410	4761	164	1529	16.9%	0.80 [0.68, 0.95]
Total	1095	14799	822	8727	100.0%	0.79 [0.65, 0.96]

Overall effect: $p=0.02$; heterogeneity: $I^2=70\%$



Telemedicine in critical care:

- Is associated with reduction in mortality, length of stay and increase in patient safety
- Provides expert interdisciplinary support of remote ICU's
- Improves the care process
- Requires wide staff acceptance of the concept
- Requires complete access to all patient related information

In addition to researching how telemedicine and telemonitoring can be used to improve the treatment of ICU patients, Thalea is also a pilot project for a new type of tender procedure known as pre-commercial procurement (PCP).

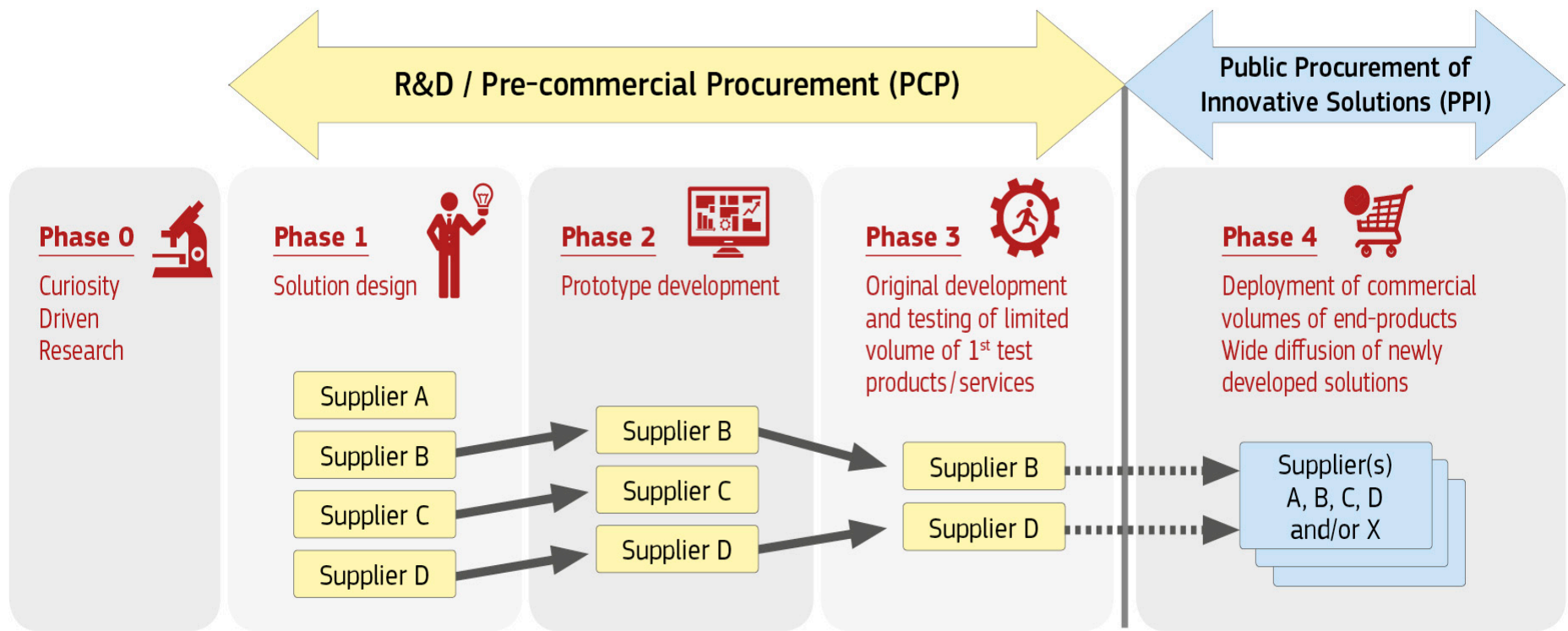
The procedures involved:

- **Pre Commercial Procurement (PCP)**
PCP aims to steer the development of solutions towards concrete public sector needs, whilst comparing/validating alternative solution approaches from various vendors.
- **Public Procurement for Innovation (PPI)**
PPI aims to act as launching customer/early adopter/first buyer of innovative commercial end-solutions newly arriving on the market.

Innovation Procurement = PCP + PPI

PCP to steer the development of solutions towards concrete public sector needs, whilst comparing/validating alternative solution approaches from various vendors

PPI to act as launching customer / early adopter / first buyer of innovative commercial end-solutions newly arriving on the market

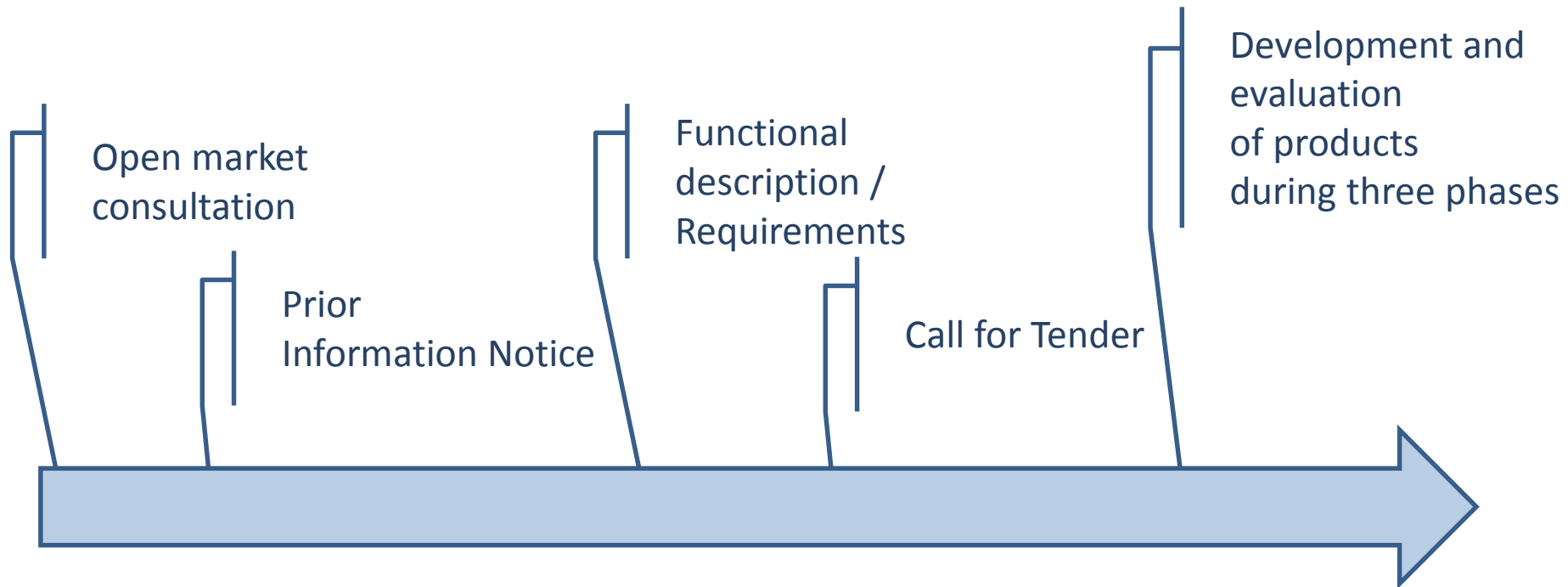


PCP advantages:

- Opportunity to establish an early customer, for a new solution
- Chance of exploitation of developed solutions increases since PCP focuses on specific identified needs
- Intellectual Property Rights (IPR) will stay completely within the developing companies
- UKA, AZM, FPT, ZOL, and NOHD will acquire the right to use the IPR developed in the Thalea PCP by companies

Thalea PCP-process

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Thalea project timeline

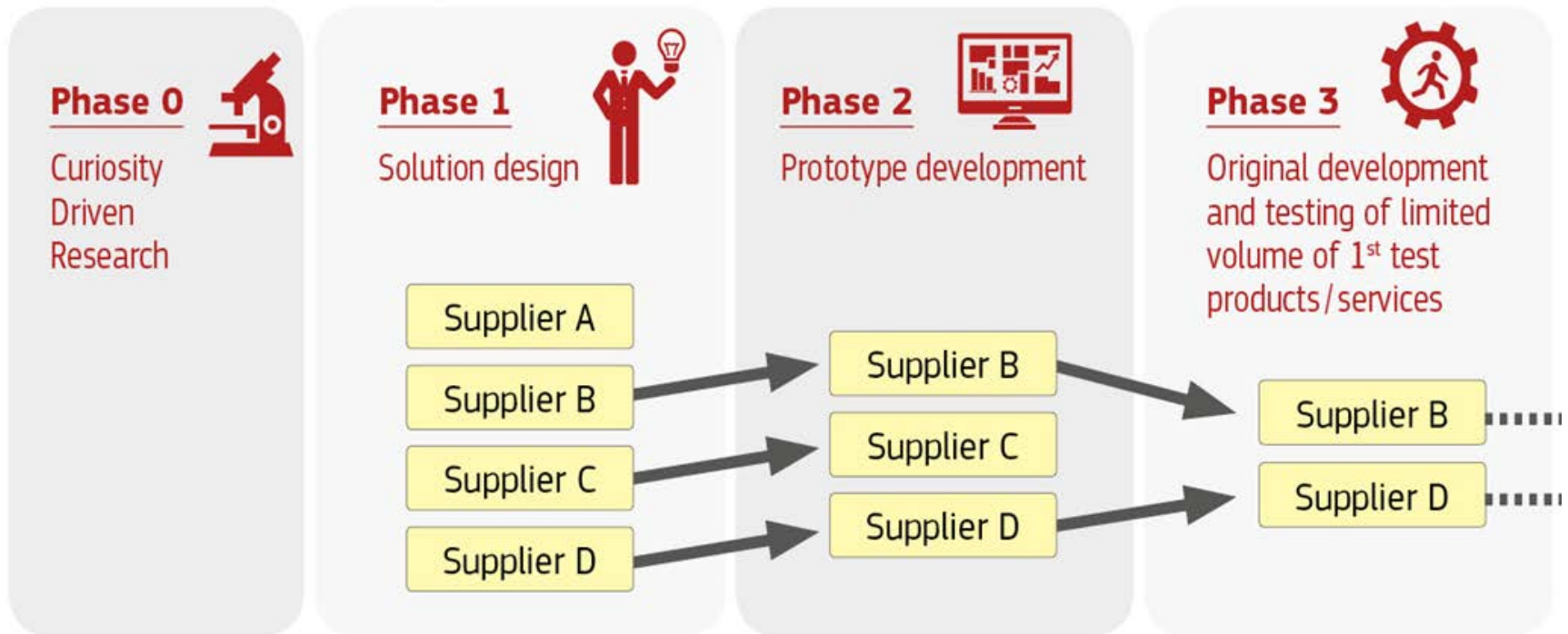
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- 2012 Thalea consortium established
- November 2013: Project start
- December 2013 - February 2014: Open market consultation
- November 2014 – June 2015: PCP phase 0: Call for tender
- June - September 2015: PCP Phase 1: Selected tenderers develop a solution design
- September 2015 – July 2016: PCP Phase 2: Top-3 solution-designs develop into prototype
- August – November 2016: PCP Phase 3: Top-2 prototypes develop into test system
- Thalea II / PPI Phase 1: deployment of commercial product

The PCP-process

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PCP from demand to product



Objectives:

- Contact with stakeholders
- Insight in market and state of the art

Strategy followed:

- Online questionnaire to determinate the demands of the aspired solution
- Regional presentations for interested companies on PCP-procedure
- Support of formation of tender-consortia

Results open market consultation:

- 23 interested companies from 5 different countries
- 52% are e-specified companies
- 25% are PDMS manufacturers
- 82% of companies are familiar with data-safety and security
- Strong interest in forming of consortia

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Formal process:

- Prior information notice launched
- Functional description designed
- Call for tender launched
- Open procedure with bidding competition
- 6 tenderers responded

Phase 1: solution design

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Results Phase 1:

- 5 tenderers developed a solution design
- High quality concepts
- Evaluation by the Thalea consortium

If you have any questions or remarks, please feel free to contact the Thalea team by e-mailing to:

thalea@ukaachen.de

For more Thalea information please visit:

www.thalea-pcp.eu.

