

Introducing Flex4Apps
CPS Community Enhancement, 8th of December 2018
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FLEX 4 APPS





INTRODUCING FLEX4APPS



Platform for Application and Infrastructure Flexibility in Cyber-Physical Systems

Project information

Project name	15025 Flex4Apps
Status	Running
Period	Nov 2016 - Oct 2019
Call	ITEA 3 Call 2
Challenge	Smart engineering
Website	http://www.flex4apps-itea3.org/blog
Partners	12
Costs	6,661 k€
Effort	45.70 PY
Countries	 Belgium  Germany



Project start
November 2016

Project leader
Johannes Berg, NXP Semiconductors

Project website
<http://www.flex4apps-itea3.org/>

Project end
October 2019

Project email
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CHANGING CONTEXT SINCE 2007



CHANGING CONTEXT ANNO 2017



Commoditization of storage, bandwidth, processing power



New distribution channels: Internet + app market places



Different user point of view on “Owning Software”



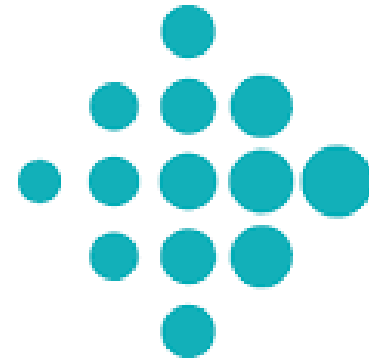
Rise of SaaS, cloud & mobile computing

OPTION 1: HARDWARE AS A VALUE CREATOR



OPTION 2: DATA AS A VALUE CREATOR

Linked 



fitbit®

ACCEPT THAT SOFTWARE BECOMES A COMMODITY
AND EXPLOIT THAT TO THE MAXIMUM

Cloud based model

Cheap distributions, low cost infrastructure, rich API ecosystem

Hyperscale

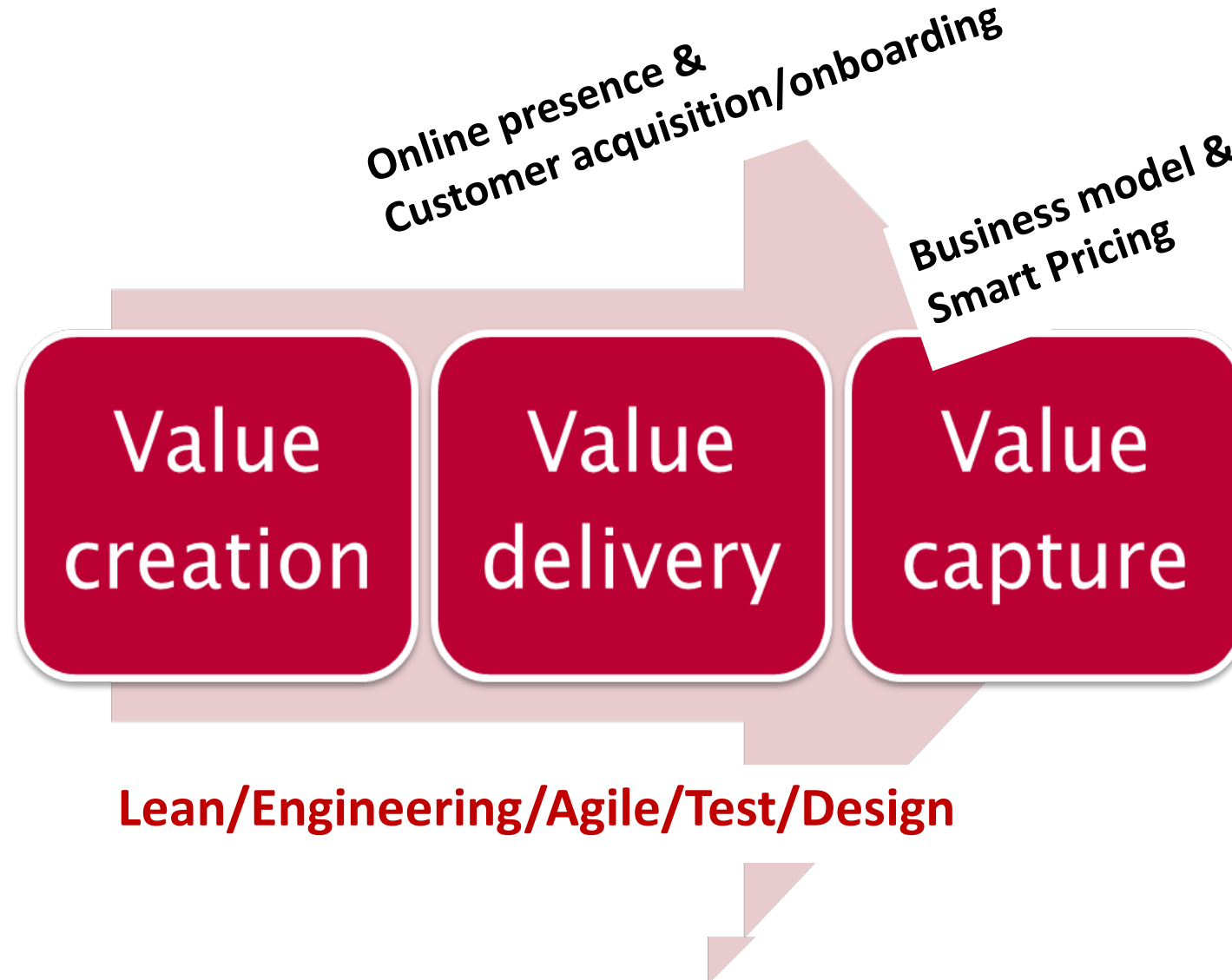
Scale up number of users/customers without scaling up in own human capital

Microcare

Maximize the value exchanged between you and each individual customer throughout entire customer life cycle

Hyperscale + Microcare = Designing Customer Intimacy at Scale

SALES, MARKETING AND SUPPORT AS ENGINEERING PROBLEMS



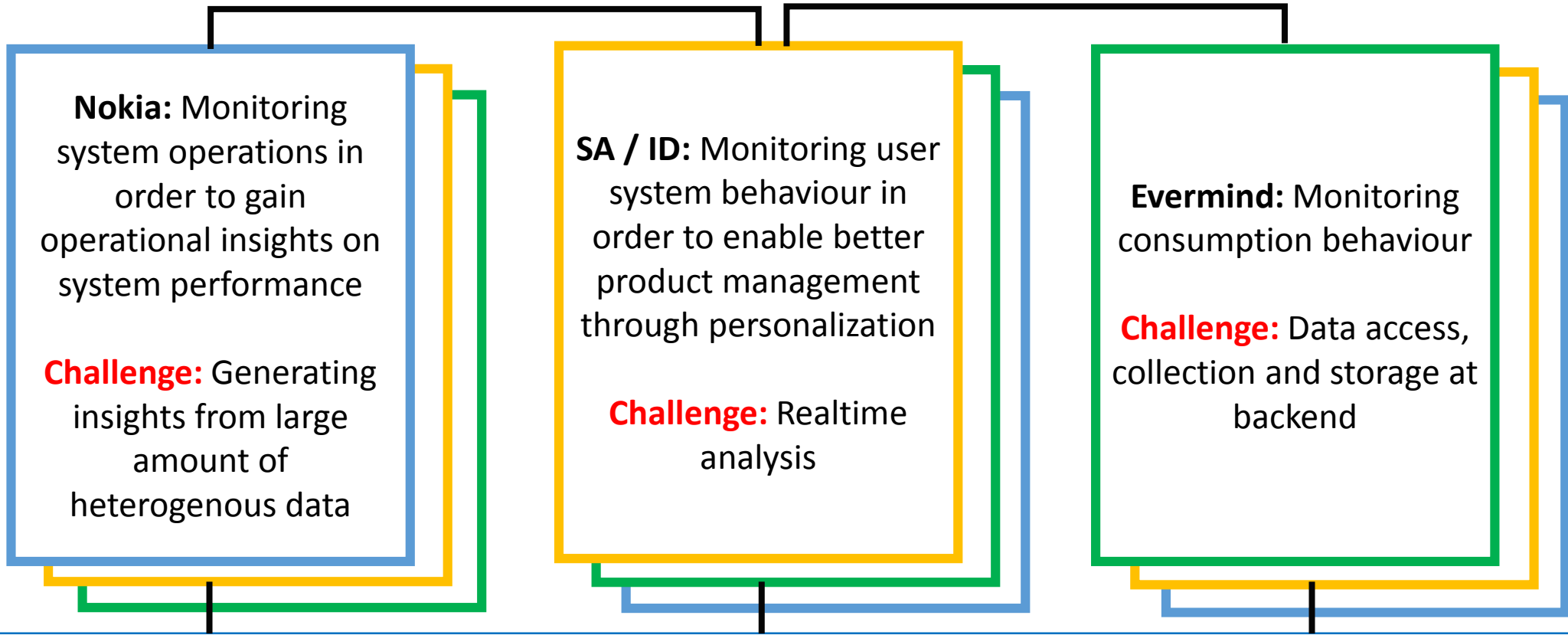
FLEX4APPS – CHALLENGES UNLOCKING THE POTENTIAL OF DATA USAGE







	Product Data	Usage Data	Environment Data
Physical Products	Instrumentation (sensors): might require product redesign Connectivity and bandwidth: cannot take internet access for granted		Sensors can measure environment too
	Security and Privacy		
Digital Products	Impact on performance/UX of monitoring and analytics Dealing with large quantities of data Valorising data: from data to insights to actions		Little insight into environment



Common goal: Securely monitoring and analysing large data quantities in heterogenous environments



The Flex4Apps Plattform Foundation
Enabling data monitoring in different environments and addressing multifold challenges

Analytics  Security   Model-based design 

FLEX4APPS – EXPECTED RESULTS



- Scalable toolbox for monitoring applications and cyber-physical systems to detect and characterize “problems”, embedding cloud technology efficiency and open APIs
- Disruptive Methods and Tools for new in kind data analysis, offline weak point assessment, adaptive performance optimisation and visualisation
- Real-world deployment of Flex4Apps in industrial use case scenarios.

FLEX4APPS – EXPECTED VALORISATION



- More reliable and scalable services
 - Quick adaptation to business growth
 - Faster failure discovery and planned recovery
- Better products and faster go to market
 - Higher conversion rates, data driven product management
- New product and services
 - Datastories' user profiling service
 - Consultancy services in product management