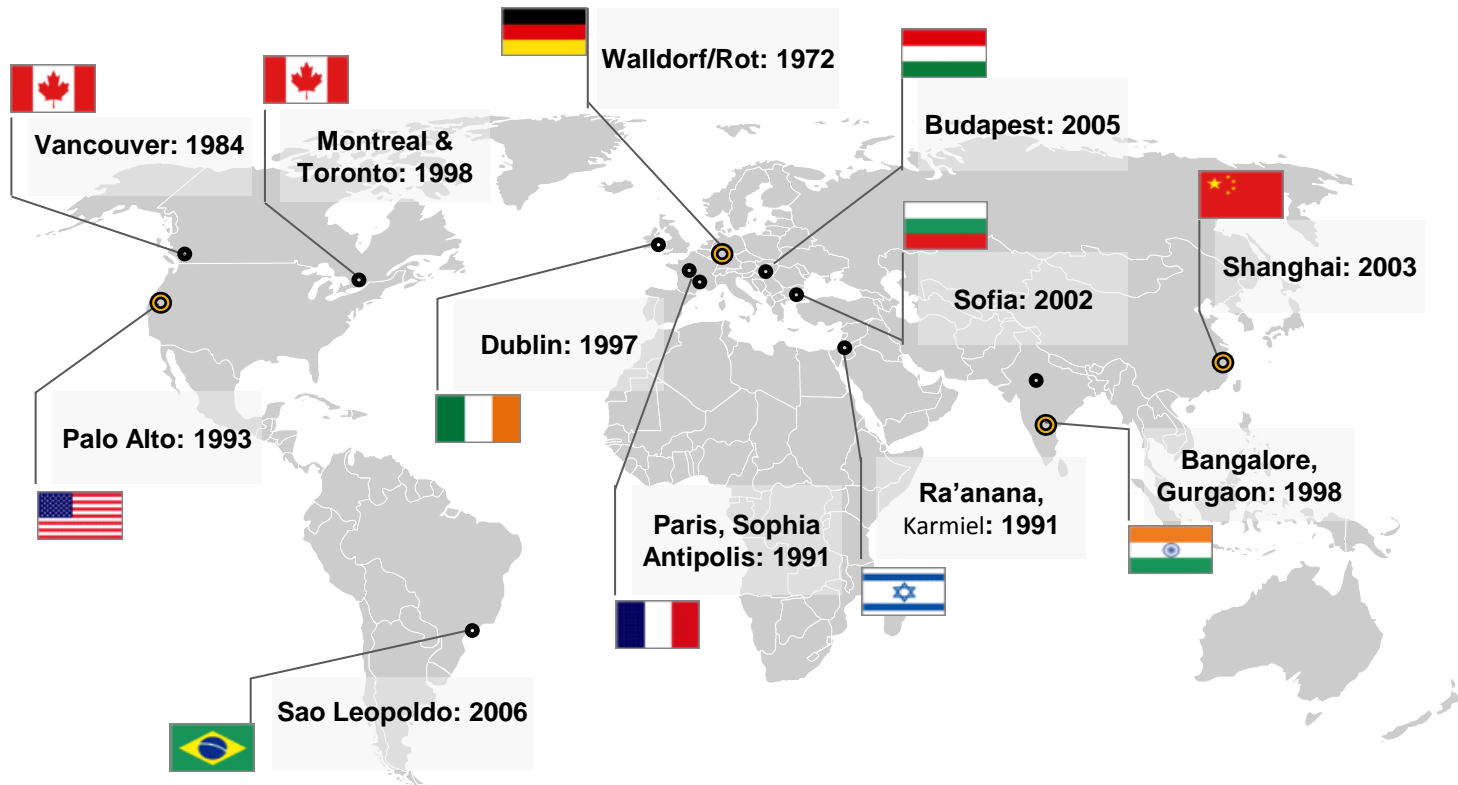


X
S A P

Jürgen Staader
Jürgen Heymann
Roland Keil
SAP AG

SENSE OF URGENCY | LEAN DEV | LEAN & AGILE DEV @ SAP

SENSE OF URGENCY | LEAN DEV | LEAN & AGILE DEV @ SAP



SAP PRODUCT CREATION ORGANIZATIONS



More employees did not help us
to come back into economies of scale.



Arbeitstrennung, Spezialisierung

Sequentielle Entwicklung und
späte Qualitätskontrolle

Starrer Projektumfang

Zentralisierte
Entscheidungsfindung

SENSE OF URGENCY | LEAN DEV | LEAN & AGILE DEV @ SAP

**WE'RE NOT BUILDING CARS –
LUCKILY!**



SOFTWARE DEVELOPMENT IS A CREATIVE PROCESS



... DONE BY KNOWLEDGE WORKERS

Manufacturing

Development

Tasks are ...

**Repetitive &
predictable**

**Non-repititive &
unpredictable**

Requirements are ...

a constraint & fixed

**a degree of freedom &
evolving**

Inventory is ...

Visible (physical objects)

Invisible (information)

...

(c) 2011 Reinertsen & Associates, Don Reinertsen, Lean Product Development

TAKE AN ECONOMIC VIEW
ACTIVELY MANAGE QUEUES
EXPLOIT VARIABILITY
REDUCE BATCH SIZE
APPLY WIP* CONSTRAINTS
FLOW CONTROL: CADENCE & SYNCHRONIZ.
APPLY FAST FEEDBACK
DECENTRALIZE CONTROL

* WIP: Work in progress

(c) 2011 Reinertsen & Associates, Don Reinertsen, Lean Product Development

PRINCIPLES OF LEAN PRODUCT DEVELOPMENT

Maximize Customer Value and Speed

**Respect for
People**

Product Development Flow

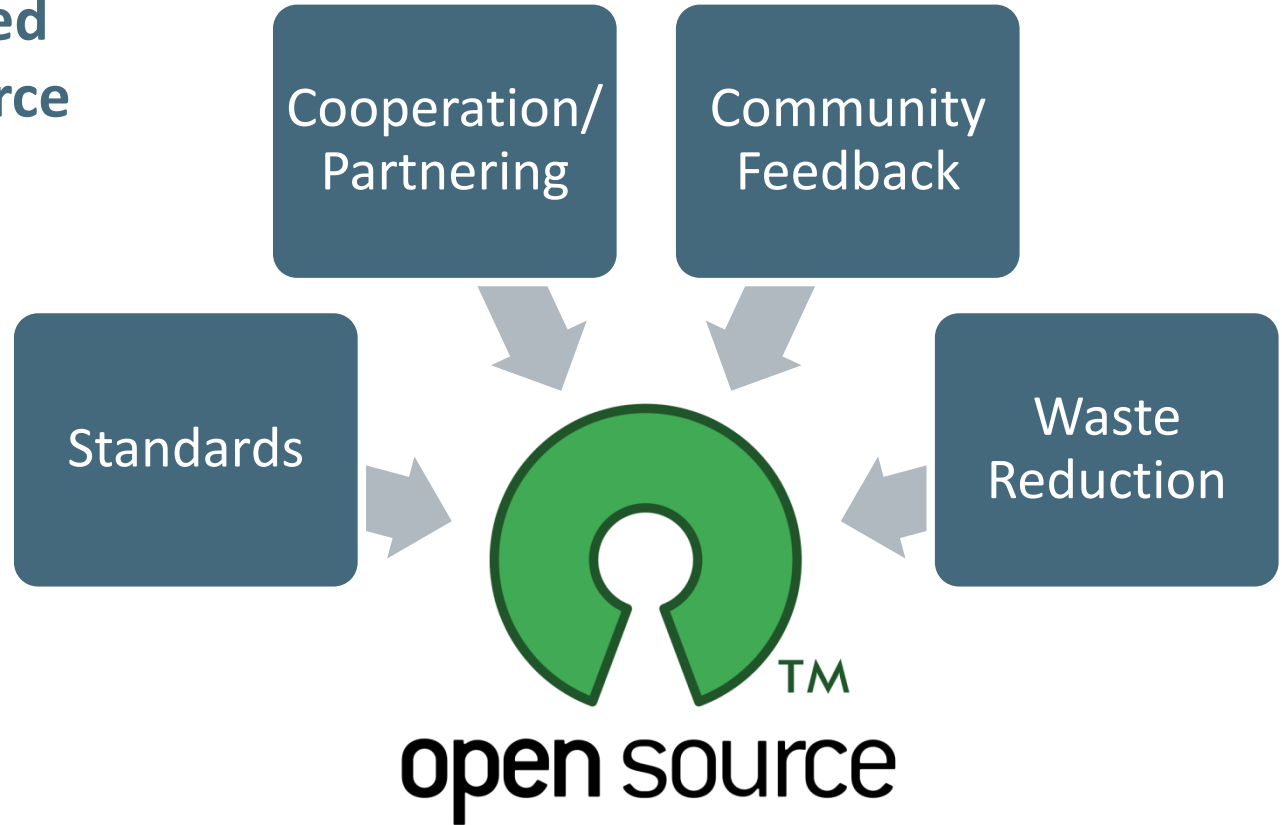
1. Take an Economic View
2. Actively Manage Queues
3. Exploit Variability
4. Reduce Batch Size
5. Apply WIP Constraints
6. Control Flow: Cadence and Synchronization
7. Apply Fast Feedback
8. Decentralize Control

**KAIZEN /
Continuous
Improvement**

LEAN Leadership

Adjusted and derived from Derived from (c): Toyota Production System (2004), Larman and Vodde (2009), Dean Leffingwell, Agile software requirements (2011)

Lean Paradigms Led to New Open Source Strategy at SAP



EXTERNALLY VISIBLE CHANGE – OPEN SOURCE INVESTMENTS

Past: Open Source is a risk

Present: Open Source provides business benefits

Why open source?



Why not open source?

Do not contribute back



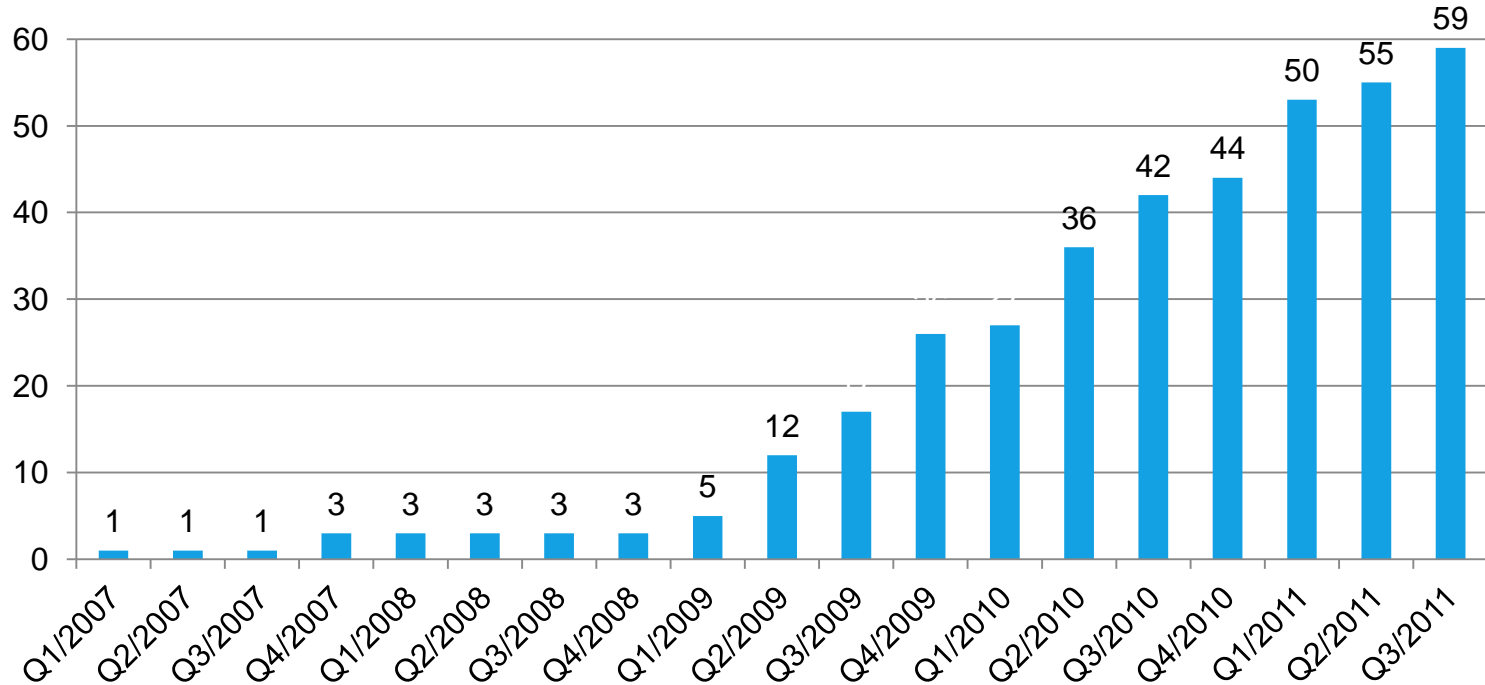
Contribute to ensure innovation

Do not go open source



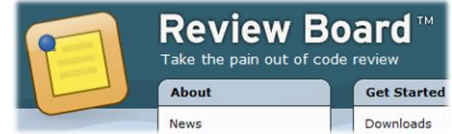
Go open source to protect investments

Approved OSS Contributions (accumulated)





VXQuery



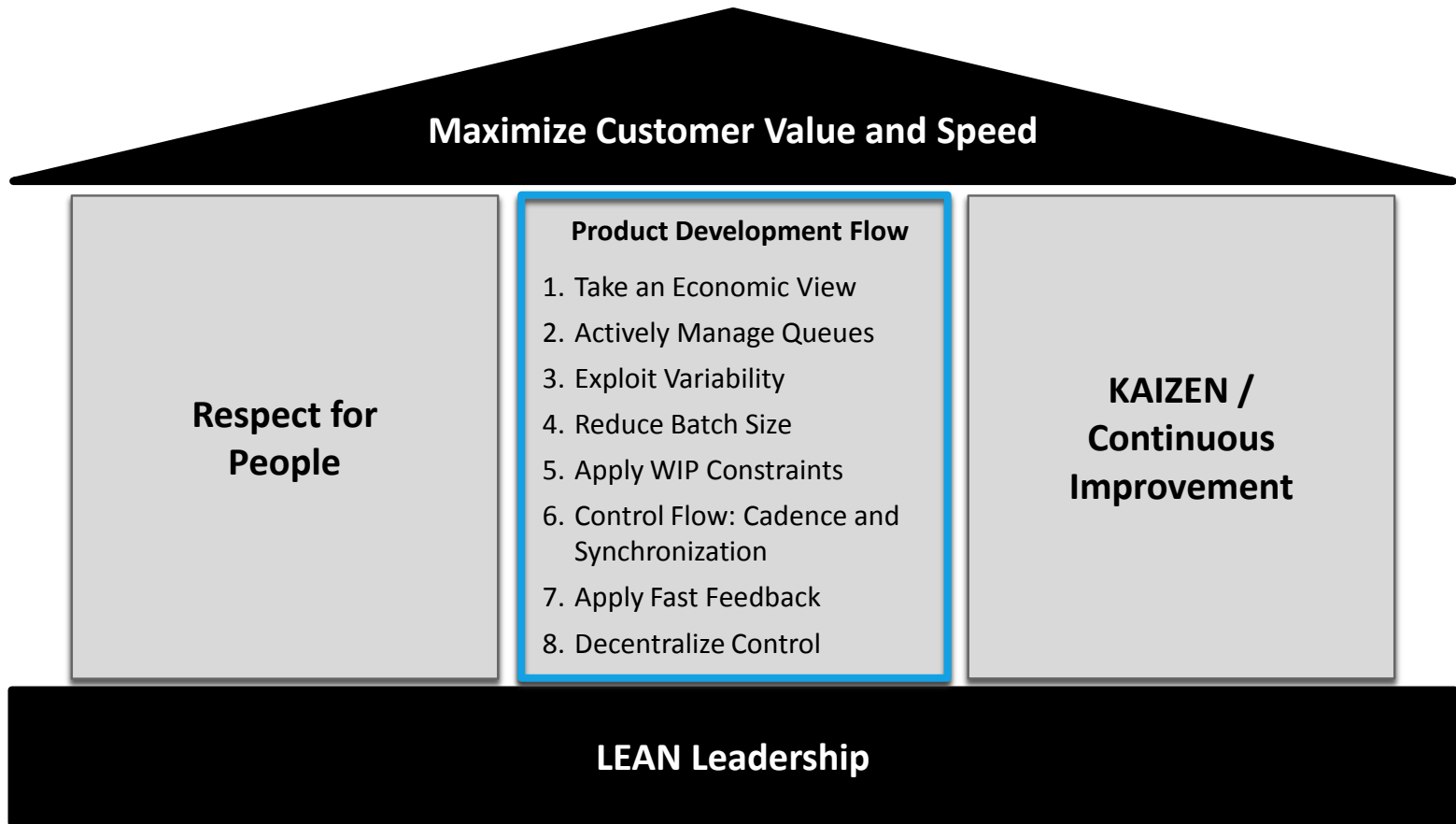
e4 Project



Memory Analyzer (MAT)



A SELECTION OF CURRENT SAP ENGAGEMENTS



Adjusted and derived from Derived from (c): Toyota Production System (2004) , Larman and Vodde (2009), Dean Leffingwell, Agile software requirements (2011)

SENSE OF URGENCY | LEAN DEV | LEAN & AGILE DEV @ SAP



Foundation
of SAP

1972

1980

Software
Development
Lifecycle
(SDLC 1.0)

1990

2000

Product
Innovation
Lifecycle
(PIL 1.0)

2003

2006

White/
Yellow/
Blue
Process
Standards

2008

2010

Project-based development
together with customers and
„developer-consultants“

Solution
Development
Lifecycle
(SDLC 2.0)

Product
Innovation
Lifecycle
(PIL 2.0)

LEAN / Agile
Software
Product
Development

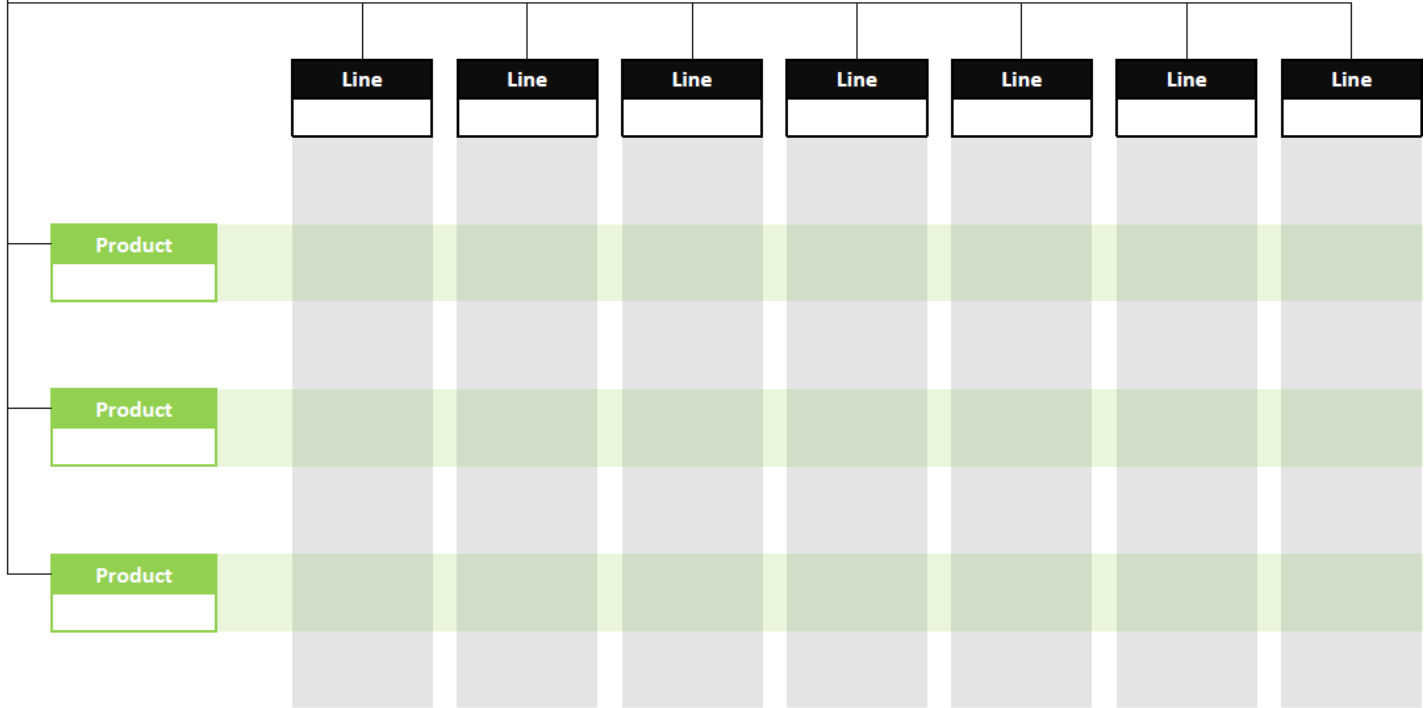
[5]

Multi-functional teams

led by a Chief Product Owner

responsible for a product

beginning-to-end



MATRIX ORGANIZATION

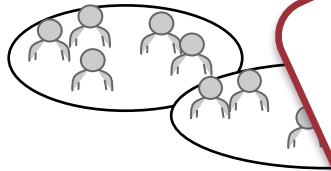


[6]

SCRUM IN DEVELOPMENT TEAMS

Split your organization

– small, cross-functional, self-organizing teams

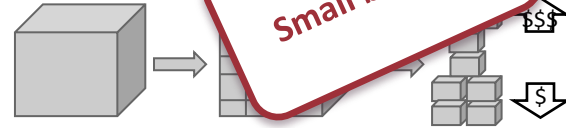


Decentralize control with alignment / Respect for People

Split your work

– small, frequent releases with customer, effort related

– pull together

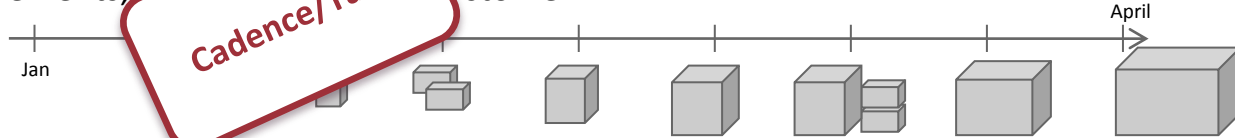


Small batches

Split time

– fixed time increments, frequent releases

– iterations (1-4 weeks) deliver potentially shippable increments, frequently to customer



Cadence/Takt

Optimize the release plan

– frequent releases in collaboration with the customer, frequent releases gained by inspecting the release and adjusting

Flow-control

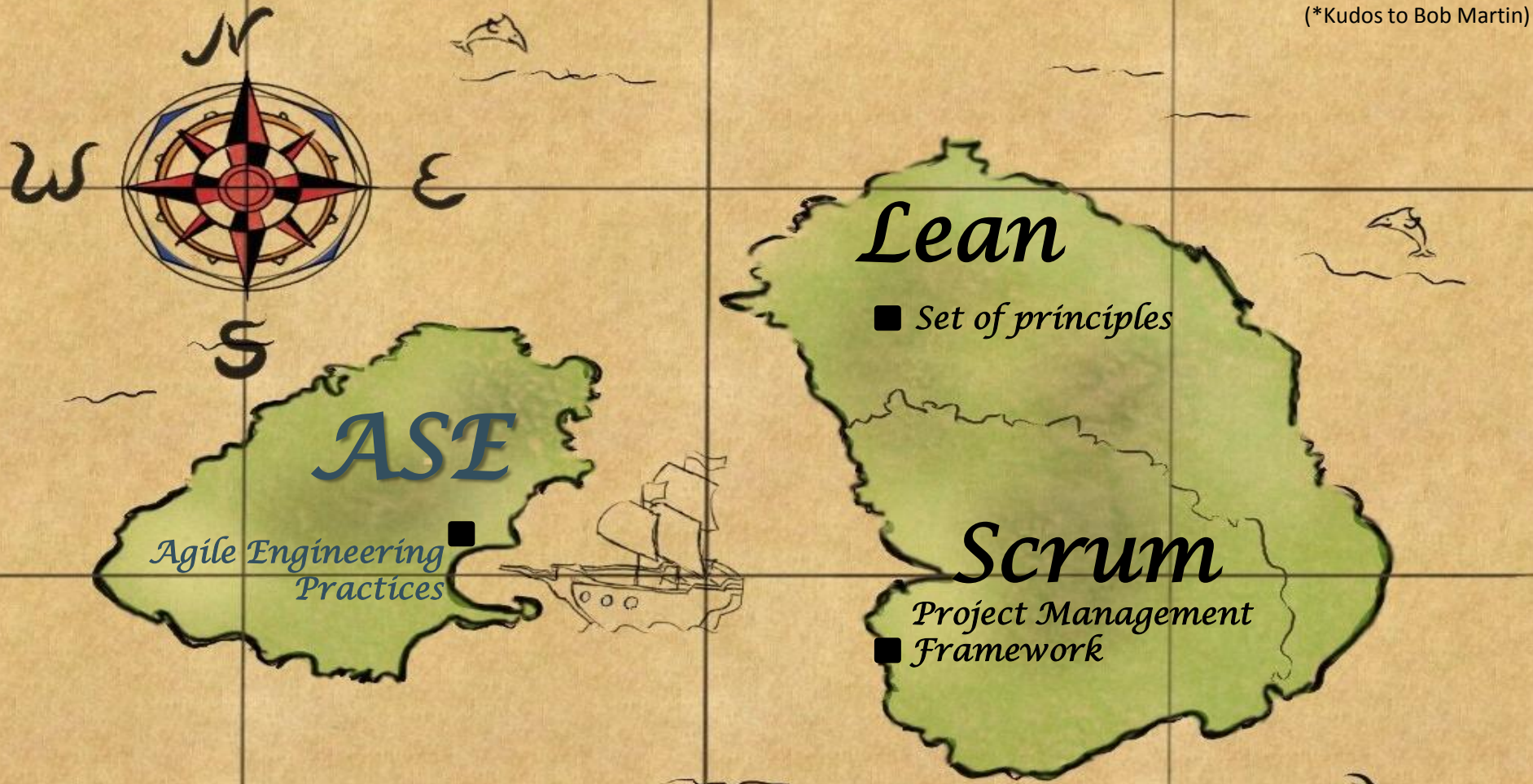
Retrospectives

– frequent releases after each iteration

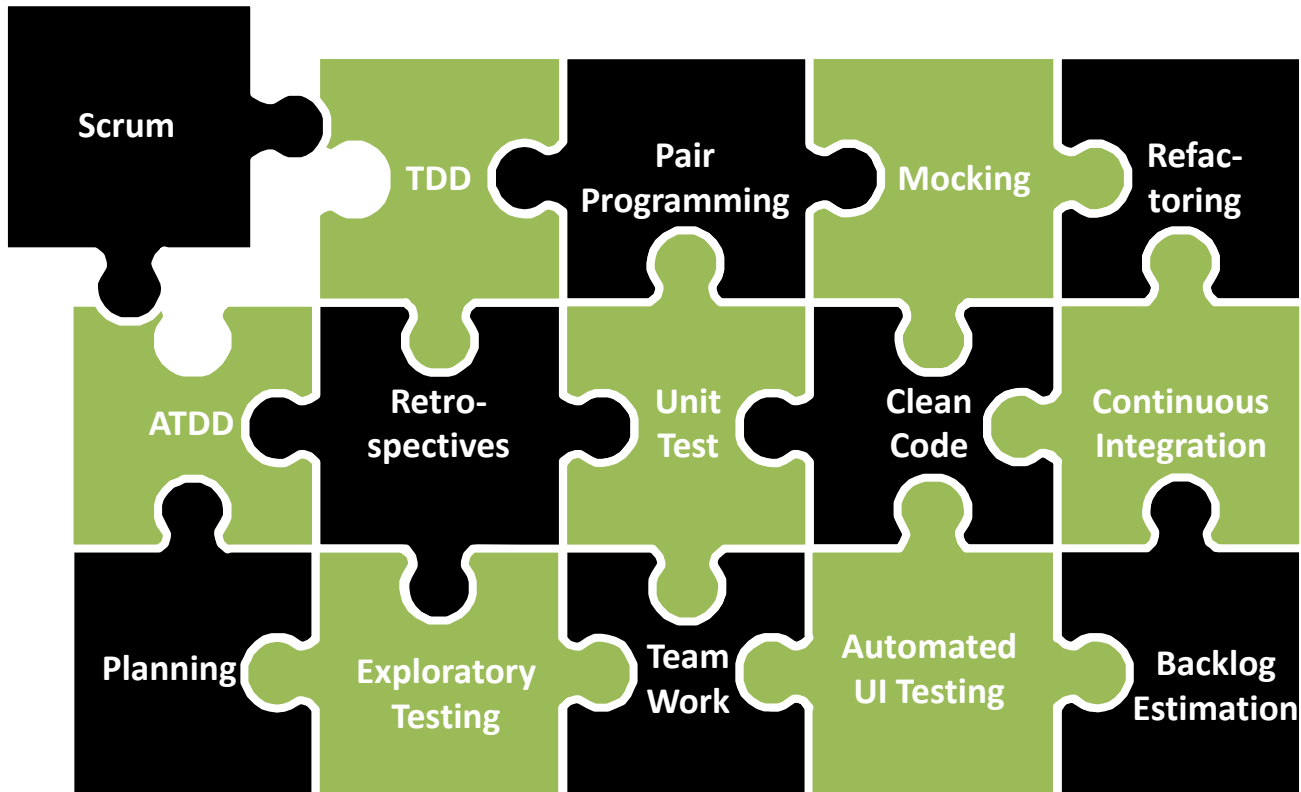
Continuous improvement

Adjusted from: <http://www.crisp.se/henrik.kniberg/Kanban-vs-Scrum.pdf>

SCRUM IMPLEMENTS MANY LEAN PRINCIPLES



BUT SCRUM ALONE IS NOT ENOUGH ...*



Agile Software Engineering (ASE) comprises the values, principles and concrete practices that a developer needs to know and be able to apply to work successfully in a lean and agile context.

Different 'flavors': ABAP, Java, ...

Monday	Tuesday	Wednesday	Thursday	Friday
Introductions, Expectations	Test Isolation + DOJO	Software Craftsmanship, Clean Code	Specification by Example, Acceptance Tests	TDD & Legacy Code
Work mode				
Software Quality, "Done"	Sprint 1 continued	Sprint 2 continued	Sprint 3 continued	Sprint 4 continued
Pair Programming				
Lunch break				
TDD & ABAP-Unit + DOJO	Refactoring	UI Testing / Test Design	Exploratory Testing	'TDD in our project' - discussion
Sprint 1	Sprint 2	Sprint 3	Sprint 4	
End-of-day discussion				Q&A
End-of-day discussion				Retrospective

Shown schedule: ASE ABAP

1st week

- ASE Classroom Training
- Two teams / two coaches together

2nd week

- Sprint 1

One Week Sprints:

- Regular team backlog
- Coach presence
- Commitment to apply agile practices consistently
- Experience practicability in own context

3rd week

- Sprint 2

4th week

- Sprint 3

Code:	+ €
Education: 2 week *	- €
Testing Effort:	- €
Refactoring:	- €
Pair Programming:	- € / 2
<hr/>	
	< € ?

Invest in agile practices?

A SIGNIFICANT INVESTMENT – IS IT WORTH IT?

Code:	+ €
Agile Practices:	- €
Better Quality:	+ €
Better Design:	+ €
Knowledge Spread:	+ €
Higher Flexibility:	+ €

> €

Can we afford not to improve, Roland?

A SIGNIFICANT INVESTMENT – IS IT WORTH IT?

HOME

- ▶ Technology and Trends
- ▶ Connected Lifestyle
- ▶ Business
- ▶ About

YOUR PRODUCT RECOMMENDATIONS

Printer HT-1040



With the Laser Professional Eco printer you get a

professional printing solution for single users and small work groups. It ... [more...](#)

HT-1056 Multi Color



This ambitious home office solution with Internet

functionality offers prints in photographic quality, faxes in color and ... [more...](#)

THE BRAND NEW HT PRO SERIES



Now available:
HT Pro Series

Ultrahigh GPU speed to take away!

NOTEBOOK WARRANTY GUIDE



A warranty is violated when the promise is broken; when goods are not as should be expected, at the time the sale occurs, ... [more...](#)

SMART MONEY



Smart Money 2011: Don't loose the overview over your in- and outcomes! For private as well as professional use in small and ... [more...](#)

NOTEBOOK INNOVATION TRENDS



A high performance notebook is wanted by everyone. It's long since we put out our wish list of what we expected from laptops. [more...](#)

Notebook Pro 15

This notebook will enchant you. It not only fulfils the desire for digital mobility, but it also leaves enough space in your luggage, thanks to its slim dimensions. It's amazing that you don't ... [more...](#)



YOUR CONTENT RECOMMENDATIONS

Utilize your notebook in any airline lounge



Many airport lounges offer private meeting rooms, phone, fax, wireless and Internet access and other business services, along with provisions to enhance comfort such as free drinks and snacks. [more...](#)

Wifi on board



On domestic flights and flights to Canada, Central America, and areas in the Caribbean (including the Dominican Republic), American Airlines offers a buy on board program. [more...](#)

YOUR LAST VISITED CONTENT

Need help?

Toll-free support:
0800-0123456

[Contact us](#)



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