

# Continuous Test Improvement For Any Situation



**20e Nederlandse Testdag - Dutch Testing Day**

17 november 2014, Regardz Meeting Center Eenhoorn - Amersfoort

*Where research, education and business meet*



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# The Evolution of IT and Testing

Unstructured  
Undisciplined  
Flexible

Pioneering

Structure  
↓

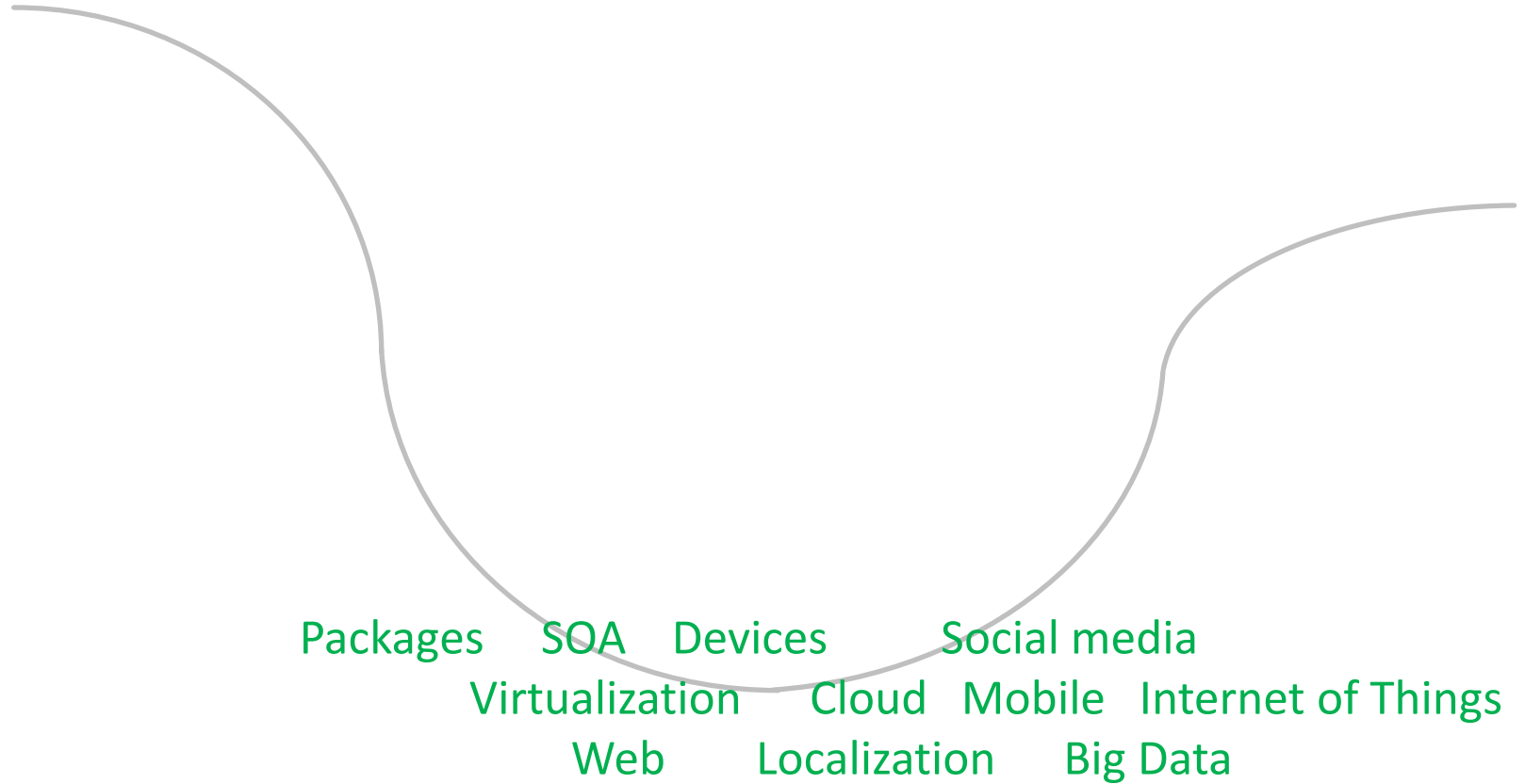
Optimizing

Structuring

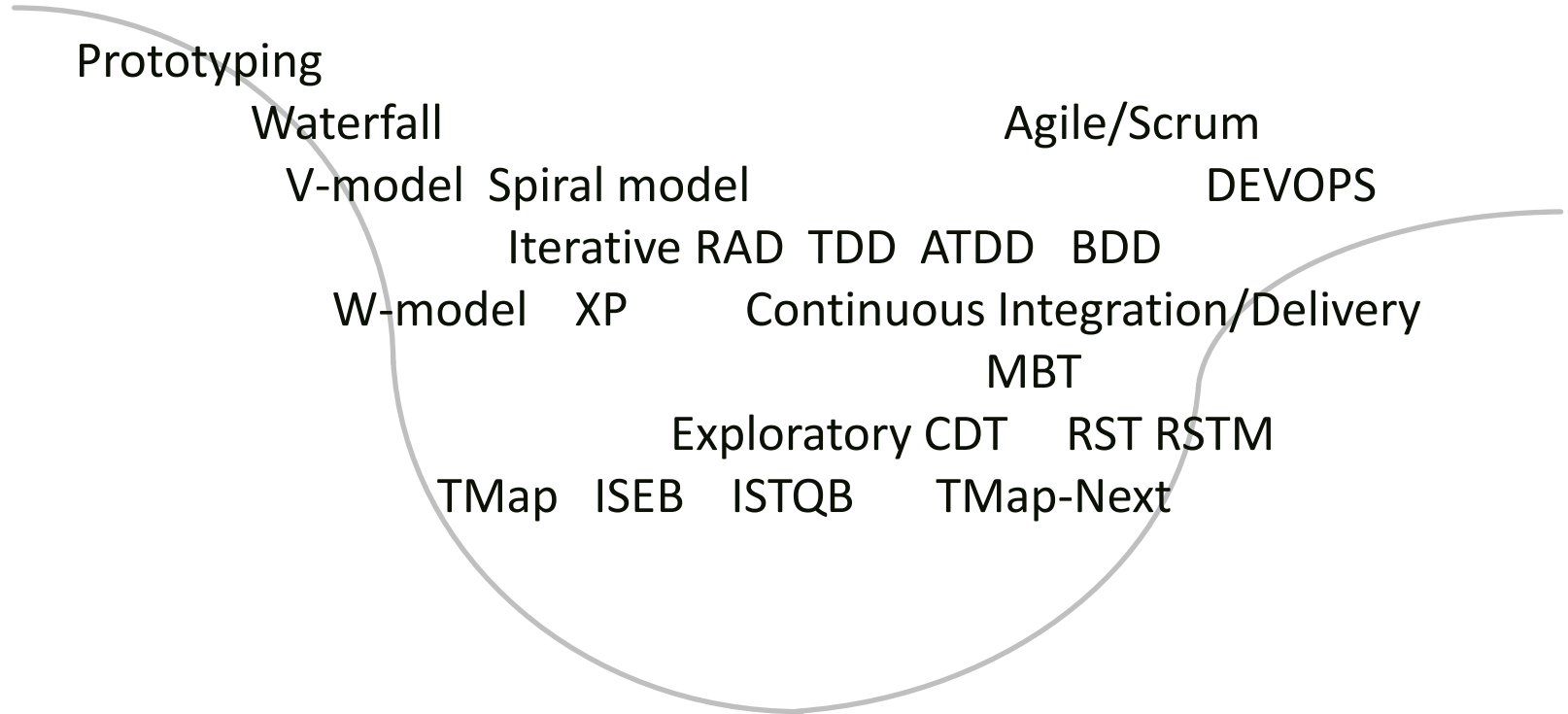
Structured  
Disciplined  
Inflexible

Then Today

# The Evolution of IT and Testing



# The Evolution of IT and Testing



# The Evolution of IT and Testing

ISO IEEE MIL-STD CMM

PSP TSP TI4Agile CMMI

TMM TMMI Juran SEI

BS 5750 TSM STEP TPI

.....

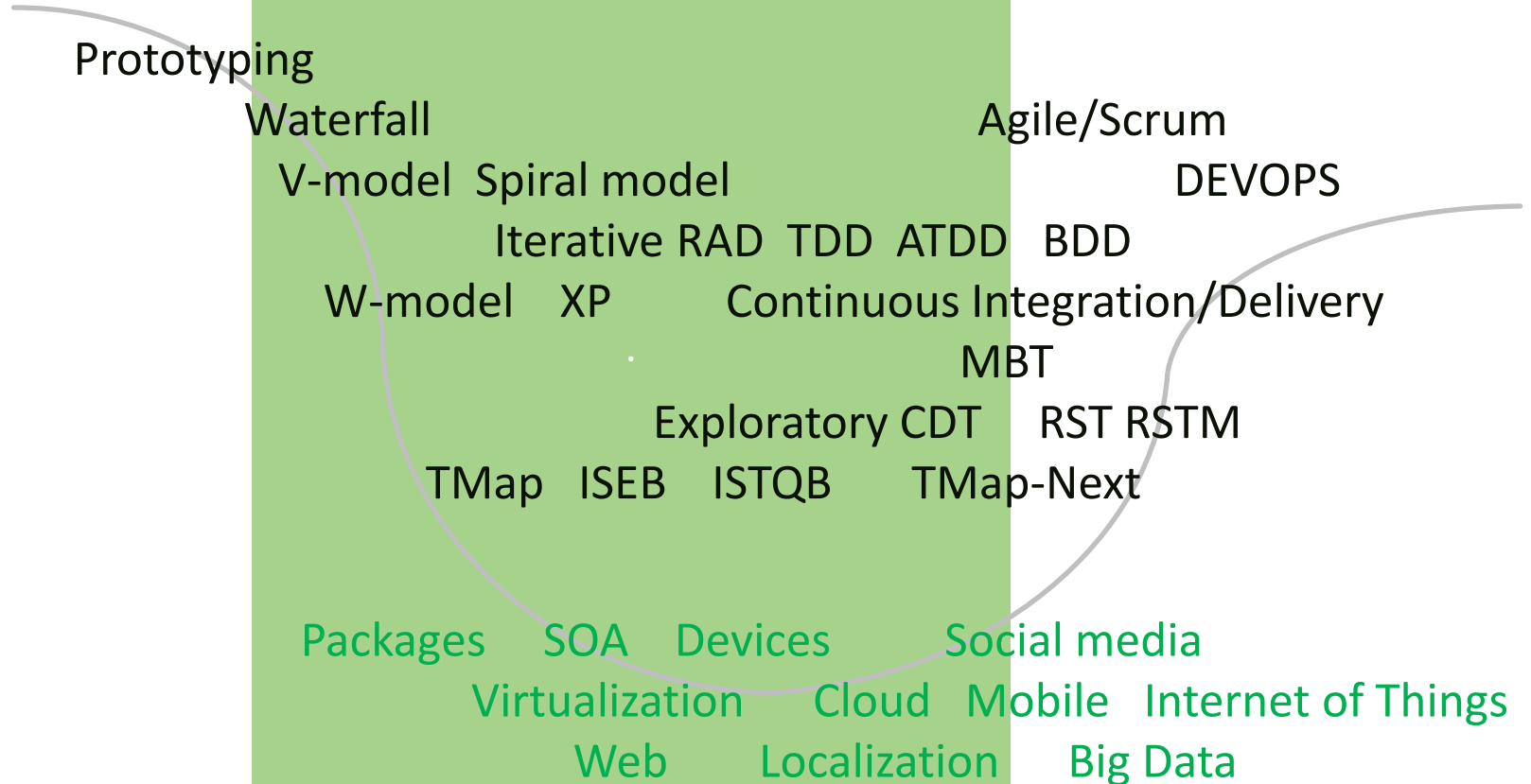
V2M2 TI4Auto CTPI

TPI-Next TQC Deming

IDEAL ISO9000-9126 TIM

TOM STEP CTP Cloutest

# Main Issue: Current TPI-models don't match



# Suitable Test Improvement Required



Fast



Flexible



Lean



Effective

# Suitable Test Improvement

# Required



Fast



Flexible



Lean



Effective

- Situational
  - Context Driven
- Continuous
- Joint effort
- Change proof
  - Proactive
- .....

People Driven  
Practical  
Sustainable



# Improvement Approach: How?

- Learn from the past

# Improvement Approach: How?

- Learn from the past
- Use successful “recent” innovations
  - Agile
  - Scrum
  - Kanban
  - Exploratory
  - Context Driven
  - Collaborating
  - Continuous
  - .....

# Improvement Approach: How?

- Learn from the past
- Use successful “recent” innovations
  - Agile
  - Scrum
  - Kanban
  - Exploratory
  - Context Driven
  - Collaborating
  - Continuous
  - .....
- Good practices





GLOBAL SUMMIT  
OF WOMEN  
2014

Paris,  
France



SOMMET MONDIAL  
DES FEMMES  
2014

Paris,  
France



S. BANERJI

G. MONSELLATO

NKO

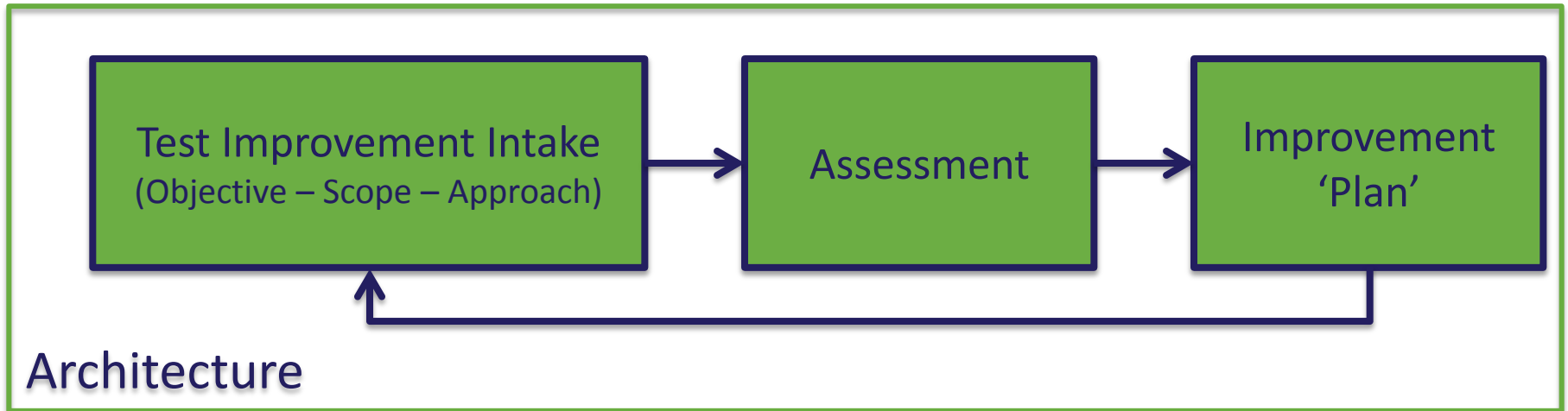
S. TRUJILLO

F. OUDEA

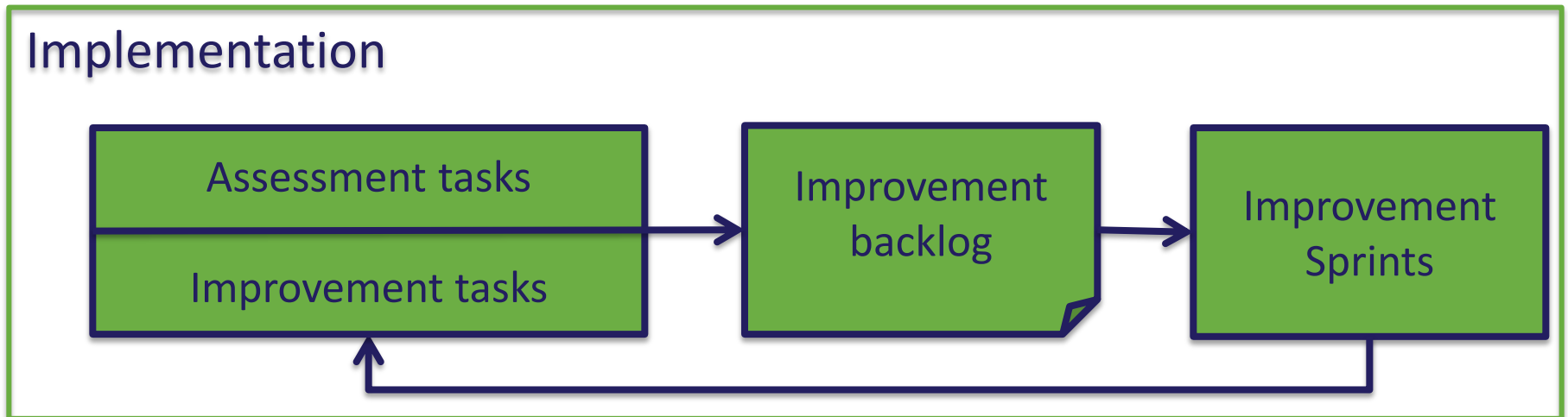
M. LANDEL



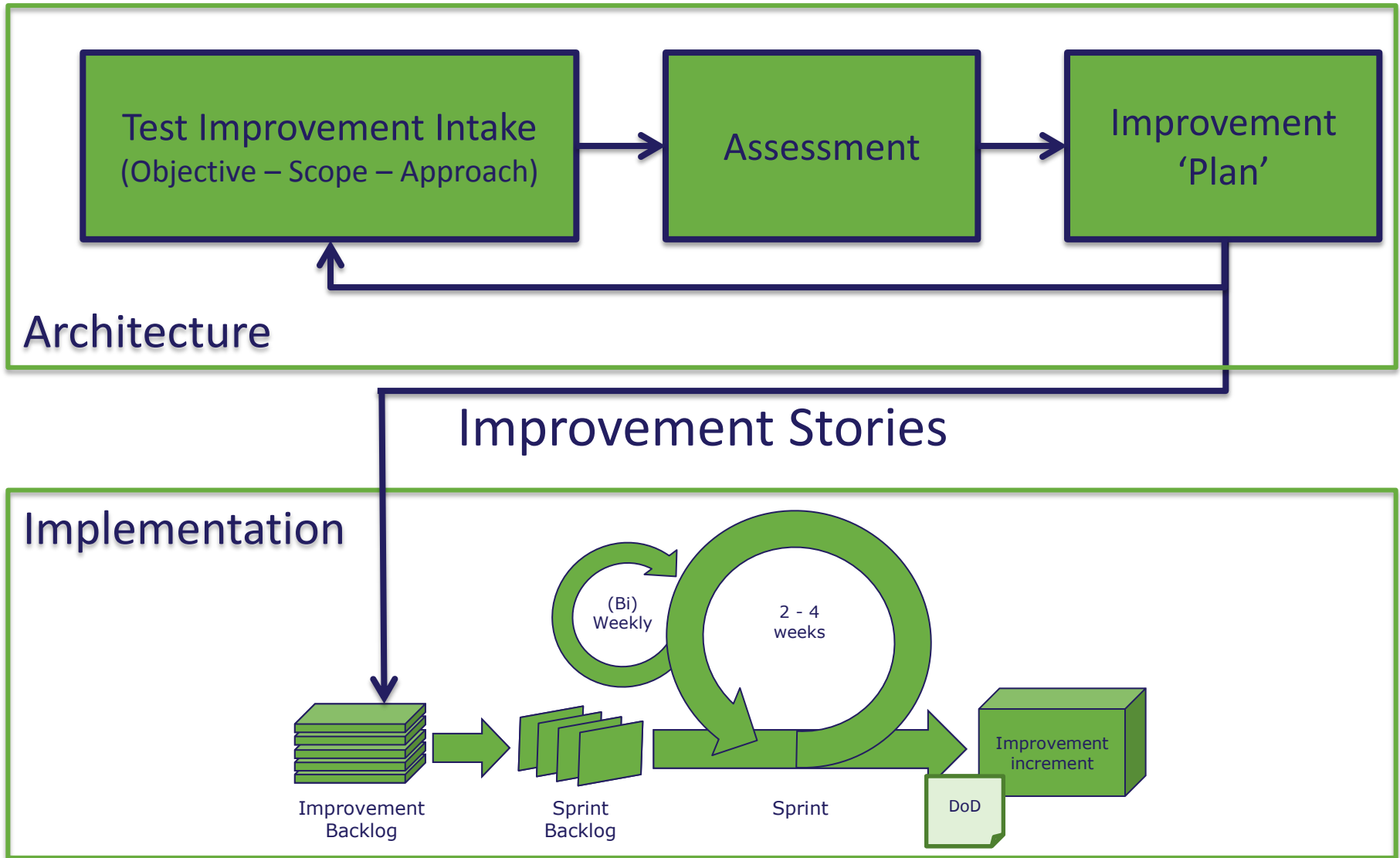
# Test Improvement at two levels



## Continuous Improvement



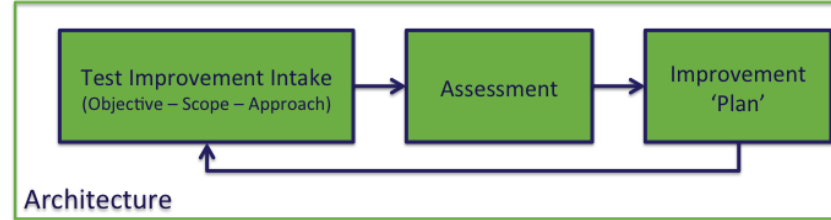
# Test Improvement using Scrum



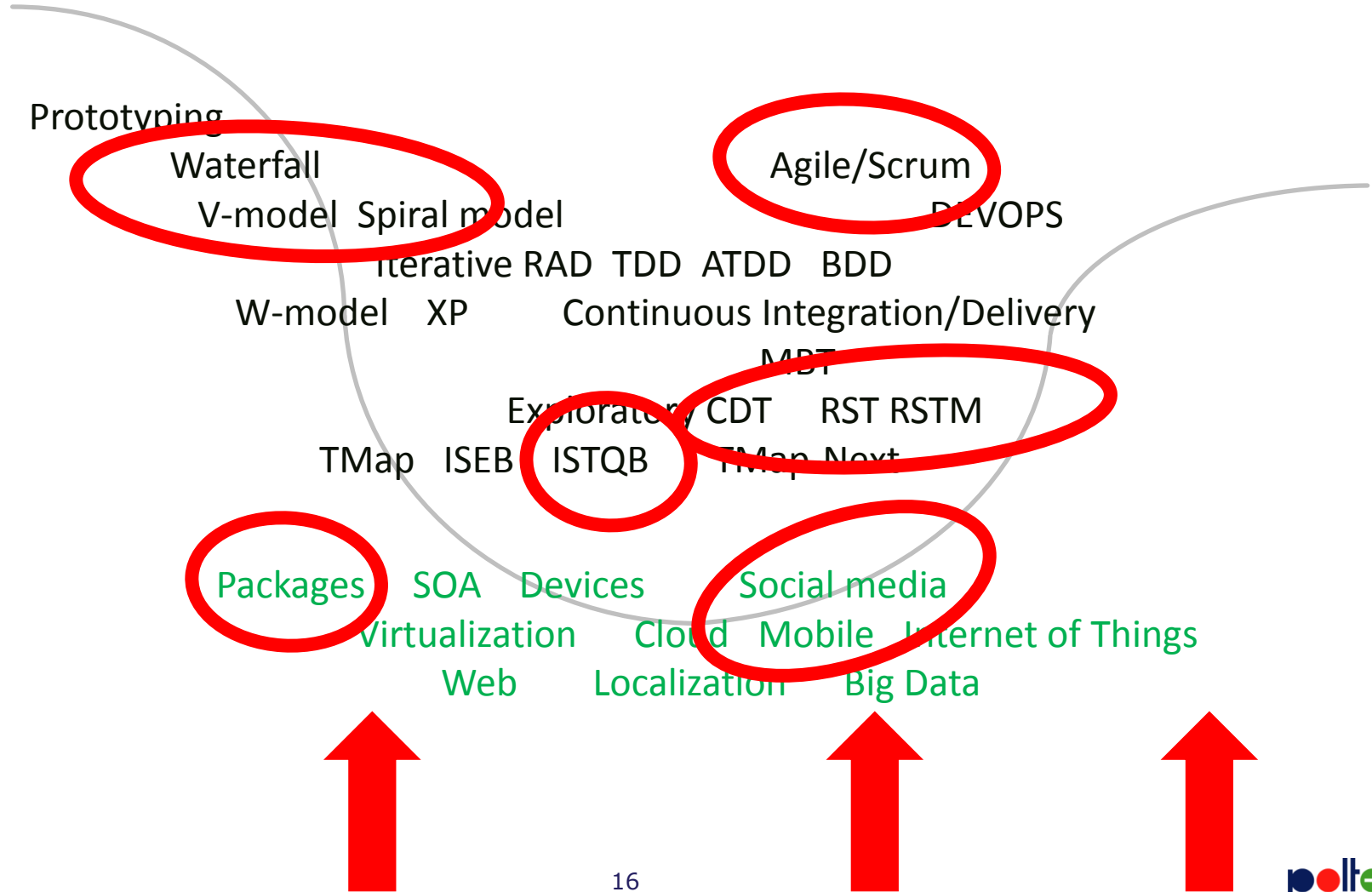
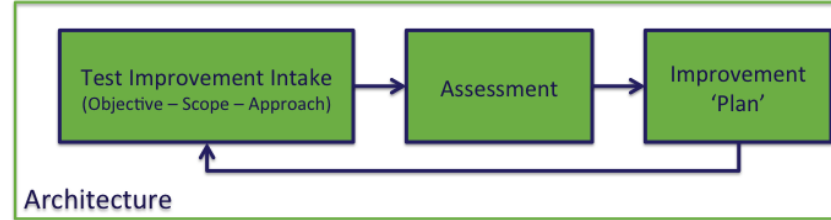


# Improvement Intake

- Objectives
  - T, C,  $Q_{(P)}$ ,  $Q_{(T)}$ , ...
- Scope
  - Area of consideration
- Approach matching
  - Context
  - Models
  - Selection



# Improvement Intake





# TPI Models & Approaches

- **Bound**

- TPI Next
- TMMI
- STEP
- CTP
- GQM
- .....



# TPI Models & Approaches

- **Bound**

- TPI Next
- TMMI
- STEP
- CTP
- GQM
- .....



- **Focused**

- TI4Agile
- TI4Automation
- CTPI
- SFAI-web
- Belbin
- .....



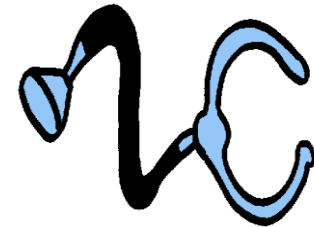
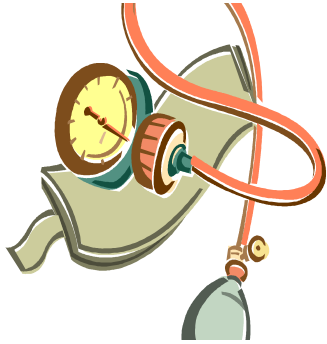
# Additional Approaches



## • Unbound

- Experience based
- Heuristic
  - Questioning
  - Discussing
- Implicit knowledge
- Exploring
- Idea raising sessions
- Out-of-the-Box
- Mind mapping
- Good Practices

# Using heuristics, etc.



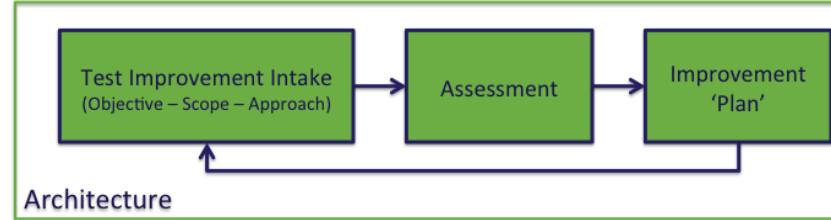
How do you feel?  
Ever felt this before?  
How about your work?  
Doing sports?  
How is your family?

In the morning?  
When was that?  
Need to walk?  
At what level?  
Similar complaints?

Before breakfast?  
...  
...  
...  
...

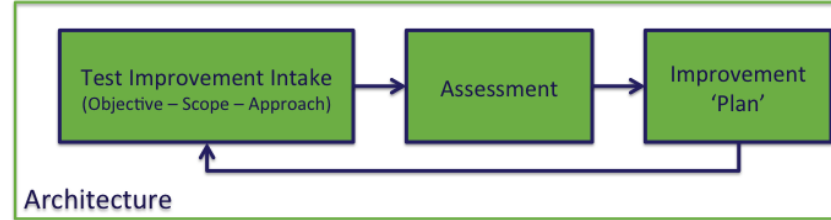
# Select an Approach

- Objectives
  - T, C,  $Q_{(P)}$ ,  $Q_{(T)}$ , ...
- Scope/Size
- Resources
  - Budget
  - Time
  - TI/domain knowledge
- Context
- Maturity (*best guess*)
- Culture



# Select an Approach

- Objectives
  - T, C, Q<sub>(P)</sub>, Q<sub>(T)</sub>, ...
- Scope/Size
- Resources
  - Budget
  - Time
  - TI/domain knowledge
- Context
- Maturity (*best guess*)
- Culture



- Fast



- *Flexible*



- *Lean*



- *Effective*

- *Situational*
- *Continuous*
- *Joint effort*
- *Change proof*
- .....

# Combine whatever contributes

Assessment

- **Bound**

- TPI Next
- TMMI
- STEP
- CTP
- GQM
- .....

- **Tailor-made**

- TI4Agile
- TI4Automation
- CTPI
- SFAI-web
- Belbin
- .....

- **Unbound**

- Experience based
- Heuristic
  - Questioning
  - Discussing
- Implicit knowledge
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- Idea raising sessions
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# Combine whatever contributes

Assessment

## • Bound

- TPI Next
- TMMI
- STEP
- CTP
- GQM
- .....

**Hybrid**

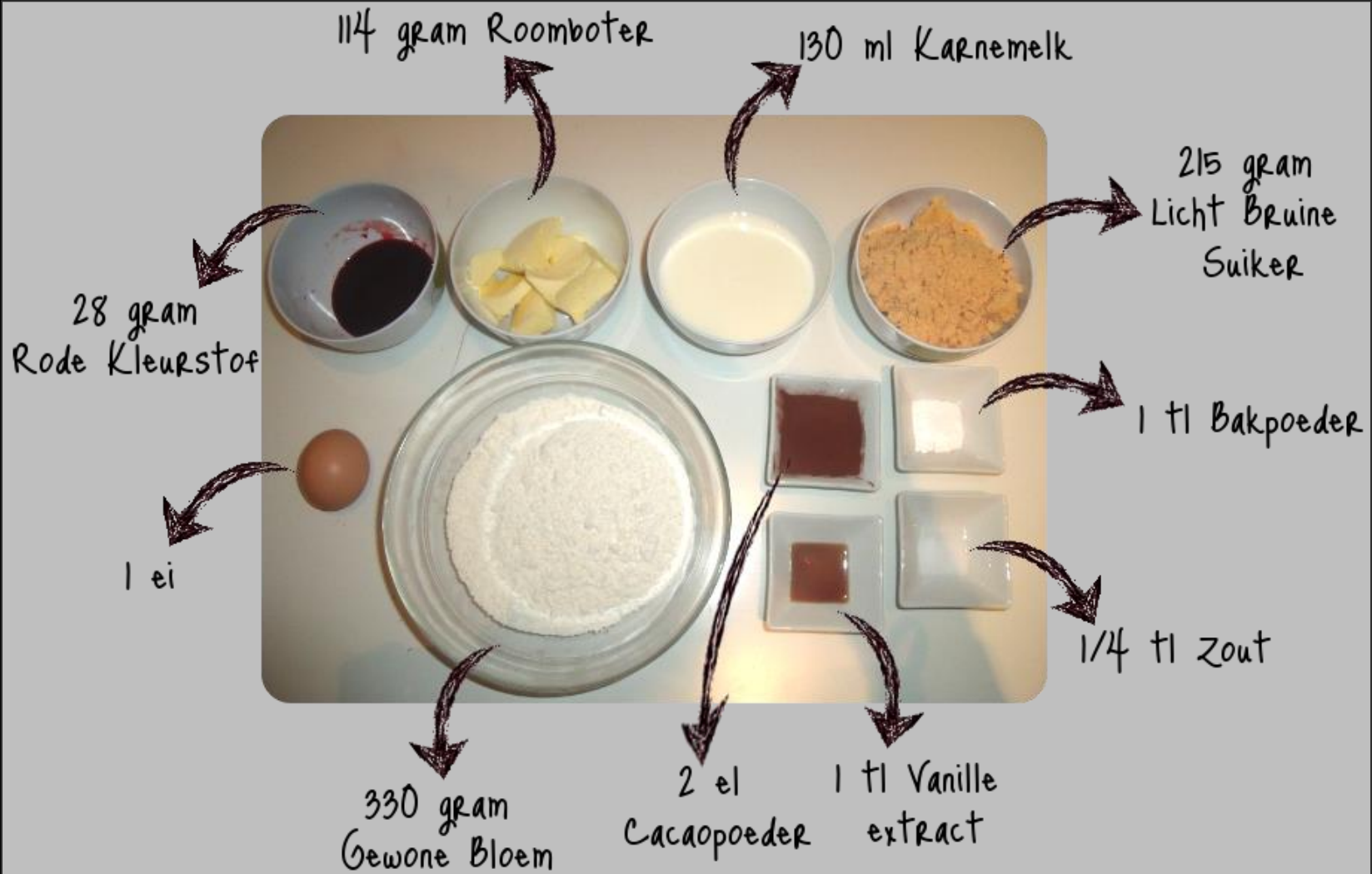
## • Tailor-made

- TI4Agile
- TI4Automation
- CTPI
- SFAI-web
- Belbin
- .....

## • Unbound

- Experience based
- Heuristic
  - Questioning
  - Discussing
- Implicit knowledge
- + Exploring
- + Idea raising sessions
- Out-of-the-Box
- Mind mapping
- Good Practices





# Bound (Focused)



Asses according to  
the model

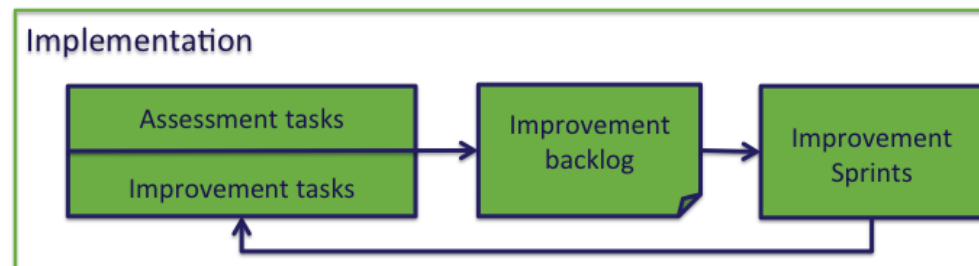
# Bound (Focused)



Asses according to  
the model, and...

Apply Scrum for implementation

Translate recommendations into improvement stories



# Bound (Focused)



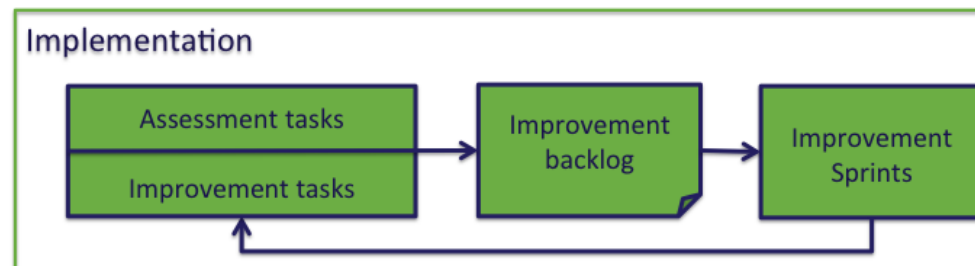
Asses according to the model, and...

# Unbound

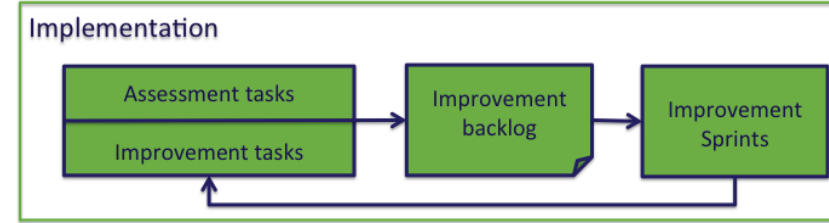
- *Interviews*
- *Heuristics*
- *Idea raising sessions*
- *Walk around*
- *Test along*
- *Attend meetings*
- *Feedback and react*

Apply Scrum for implementation

Translate recommendations into improvement stories



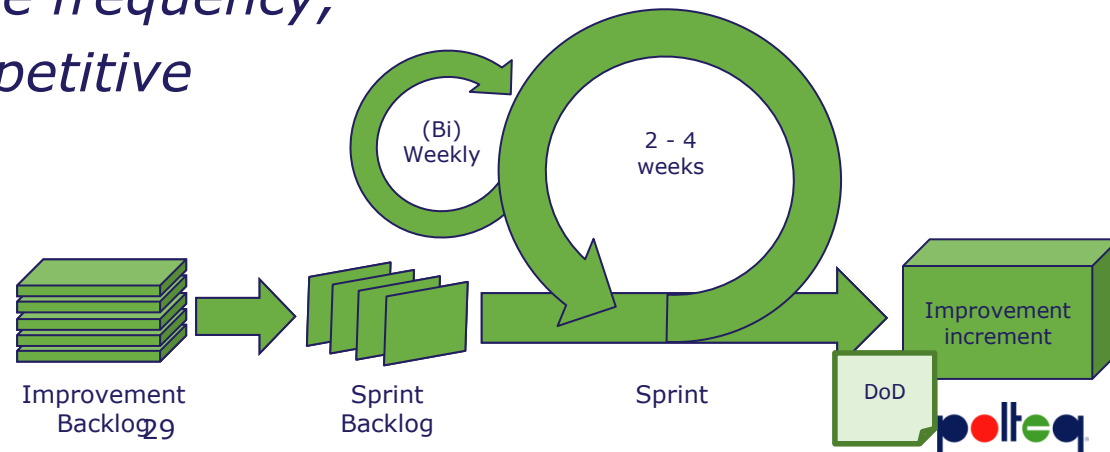
# Epics & Stories



*As senior IT-director,  
I want to increase test efficiency,  
so that testing costs are reduced by 20%*

*As scrum team member,  
I want to automate the regression tests,  
so that the effort for regression testing is reduced*

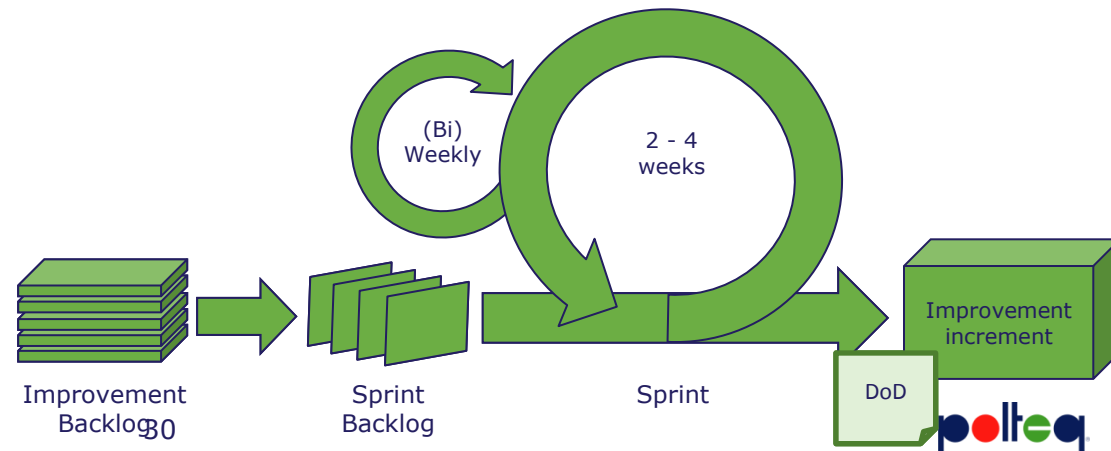
*As product manager,  
I want to increase the release frequency,  
so that we will be more competitive*



# Continuous Implementation

Improvement Sprints

- Refinement and prioritizing
- Towards tasks, including team effort and time
- Integrated with Business as Usual



# Conclusion

- Improvement of improvement is required
- The situation sets the improvement approach
- Improvement integrates with BAU using SCRUM

