



**Infonova**  
Truly Transformational Solutions

# Multi-Team Scrum in der Praxis ein Erfahrungsbericht

25. April 2009

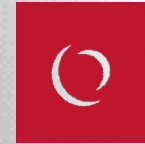
Stefan Brantner, Christian Oberleitner

Truly Transformational Solutions for Comms & Media Businesses

# Agenda

- Was macht BearingPoint Infonova?
- Warum Umstieg auf Scrum?
- Ursprünge und Philosophie von Scrum
- Scrum Übersicht
- Einsatz von Scrum & XP bei BearingPoint Infonova
- Zusammenfassung
- Q & A





Infonova  
Truly Transformational Solutions

# Was macht BearingPoint Infonova?

Truly Transformational Solutions for Comms & Media Businesses

# We make Telcos work



BearingPoint Infonova  
develops and delivers  
end-to-end (E2E) solutions  
to support core business processes of  
telco & media operators

# Warum Umstieg auf Scrum?





# Koordination?



# Silo-Denken





	Robot Tasks	Online Project Report Requirements	Public Relations Updates	Search engine in Productivity Technology	Non-physical in Value & SWH	Local level of APT Location	FOR updates local level	US & Planning Sub-Training	Creative BSB	Continuum Sub-projects	Uniting sub-projects (including sub-projects)	Asset Recovery Strategy	Quality Assurance of APT/MS/MS	How to Product And Project	How to Use and How to Use	The Structure and End Test Requirements	Requirements For Verification	Features Implementation For Verification	Requirements For Subsequent Customer Problems	Features Implementation For Assured Services	Features Implementation For Monitoring	MS Assessment For Verification/Features	MS Assessment For Assured Services	MS Assessment For Monitoring	MS Assessment For APT/MS/MS	Continuum For APT	Quality/updates Requirements of APT/MS/MS	LAST Test Requirements	Asset Sub-projects	Implementation of sub-projects	Implementation of sub-projects	
Assets	New	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100	Sub 1.100
Classical Management	New	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100	Sub 2.100
Product & Management	New	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100	Sub 3.100
Customer Relationship Management	New	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100	Sub 4.100
Order Management	New	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100	Sub 5.100
Market & Resource Management	New	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100	Sub 6.100
Team Management	New	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100	Sub 7.100
HR Management	New	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100	Sub 8.100
Marketing	New	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100	Sub 9.100
Meeting	New	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100	Sub 10.100
Production	New	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100	Sub 11.100
Assessment	New	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100	Sub 12.100
Reporting & Analysis	New	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100	Sub 13.100
Task Management	New	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100	Sub 14.100
Self-management	New	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100	Sub 15.100

# Transparente Fortschrittskontrolle?



# Mitarbeiterauslastung



# Know-How Engpässe?

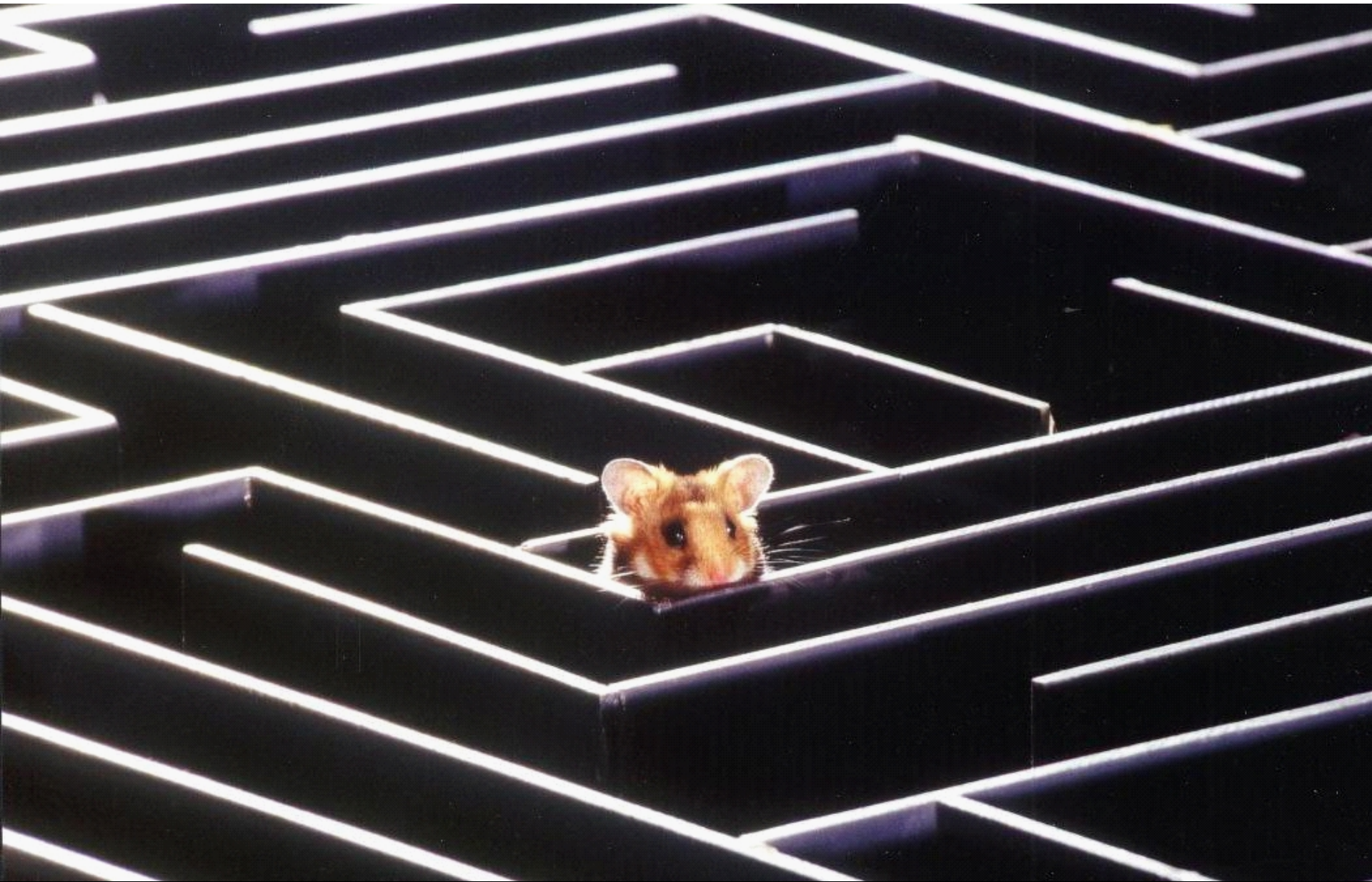
## Flexible

# Aufgabenverteilung?





# Spätes Testen



**Richtung?**



# Ursprünge und Philosophie von Scrum

# Traditionelle industrielle Produktion: Taylor (1911)

- strikte Arbeitsteilung
- klare Trennung zwischen Planenden und Ausführenden
- Schwerfällig bei Unvorhergesehenem

# The FIVE DYSFUNCTIONS of a TEAM

A LEADERSHIP FABLE



PATRICK LENCIONI

AUTHOR OF *THE FIVE TEMPTATIONS OF A CEO*





# Deming Cycle





## ■ Japan 1970er Jahre: Lean production

- ? Problem: Entmündigung der Arbeiter, Schwerfälligkeit des Systems
- ? Lösung: Vertrauen, Verantwortung, Kommunikation, ständige Verbesserungen (Retrospektiven, Deming Zyklus)
- ? Problem: Produzieren am Markt vorbei
- ? Lösung: Kunde bzw. Funktionalität steht im Mittelpunkt, rasche Reaktion auf Kundenwünsche, Reduktion von Verschwendung



## Ken Schwaber

## Jeff Sutherland

- SW <-> verarbeitende Industrie:
- Noch komplexere Prozesse
- Schnellere Änderungs-Zyklen ("Soft-Ware") von außen



# Komplexe adaptive Systeme

- Nicht die fittesten, sondern die anpassungsfähigsten...

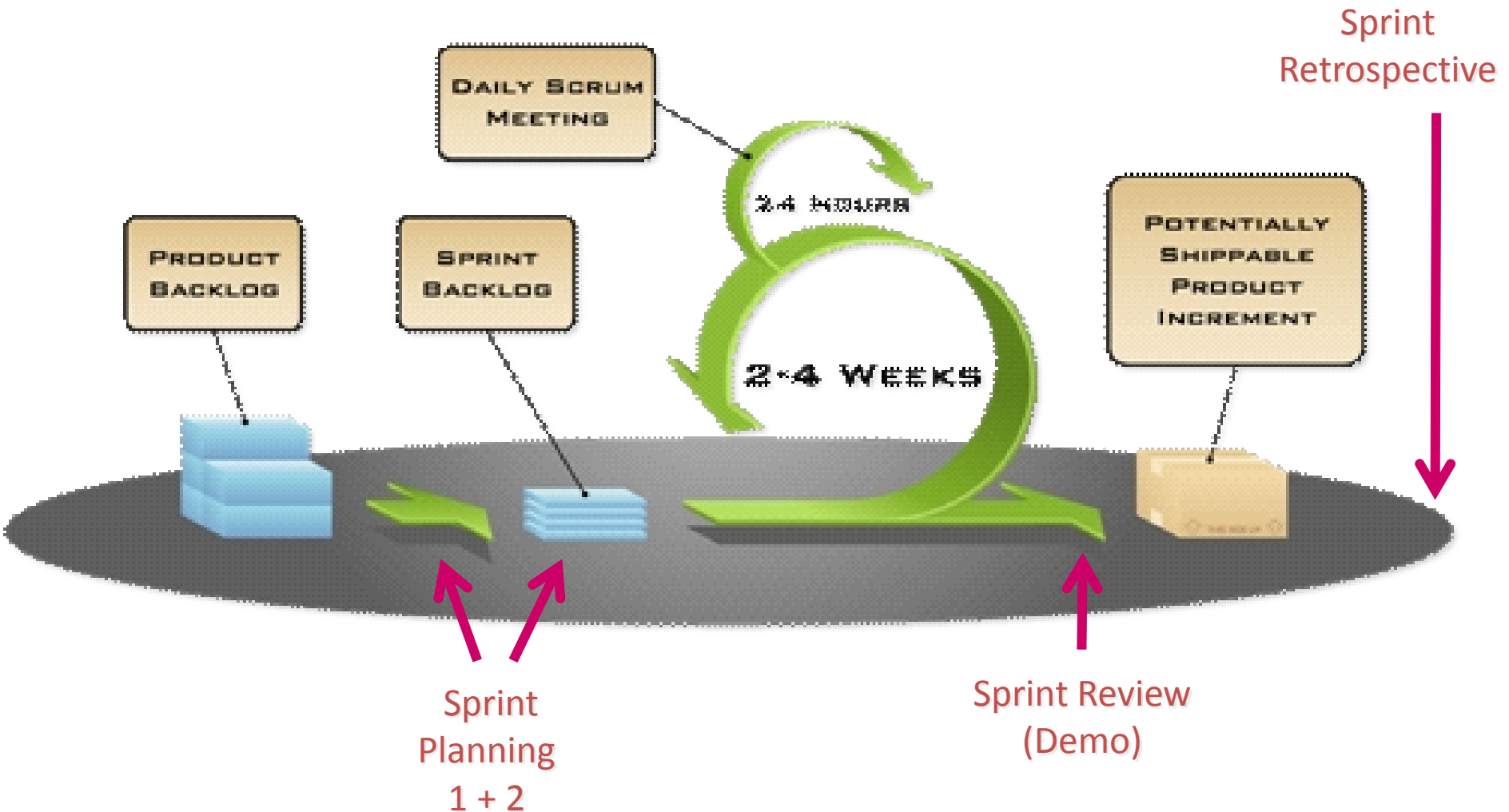
# Scrum Übersicht







# Scrum Flow

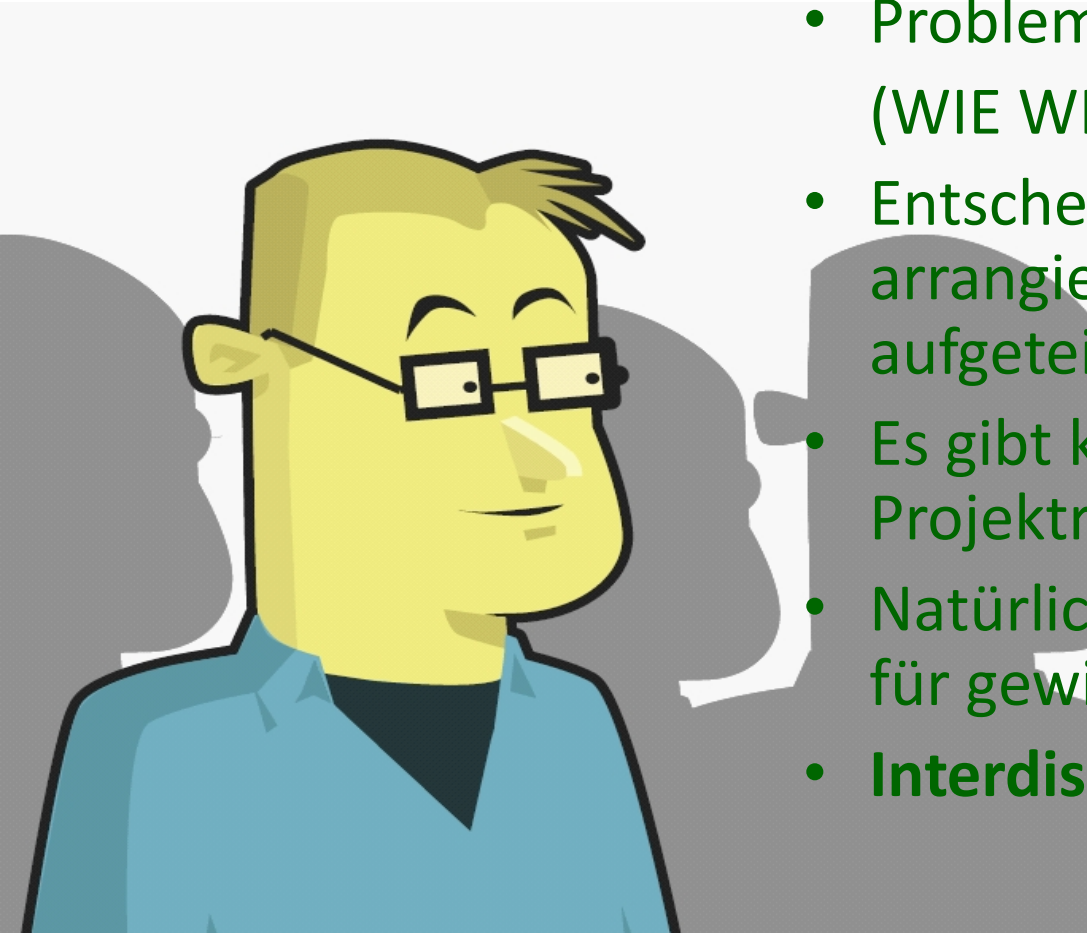


# Der Product Owner

- VISION
- „Stimme“ des Kunden
- Verantwortlich für den Return On Investment (ROI)
- Sammelt die Anforderungen (WAS IST ZU TUN?)
- Verantwortlich für den Product Backlog und dessen Priorisierung
- Verantwortlich für Releasepläne



# Das Team



- Problemlöser und Designer  
(WIE WIRD ES UMGESATZT?)
- Entscheidet selbst, wie die Arbeit arrangiert und untereinander aufgeteilt wird.
- Es gibt keine festgelegten Projektrollen.
- Natürlich kann und darf es Experten für gewisse Bereiche geben.
- **Interdisziplinär**



# Der Scrum Master

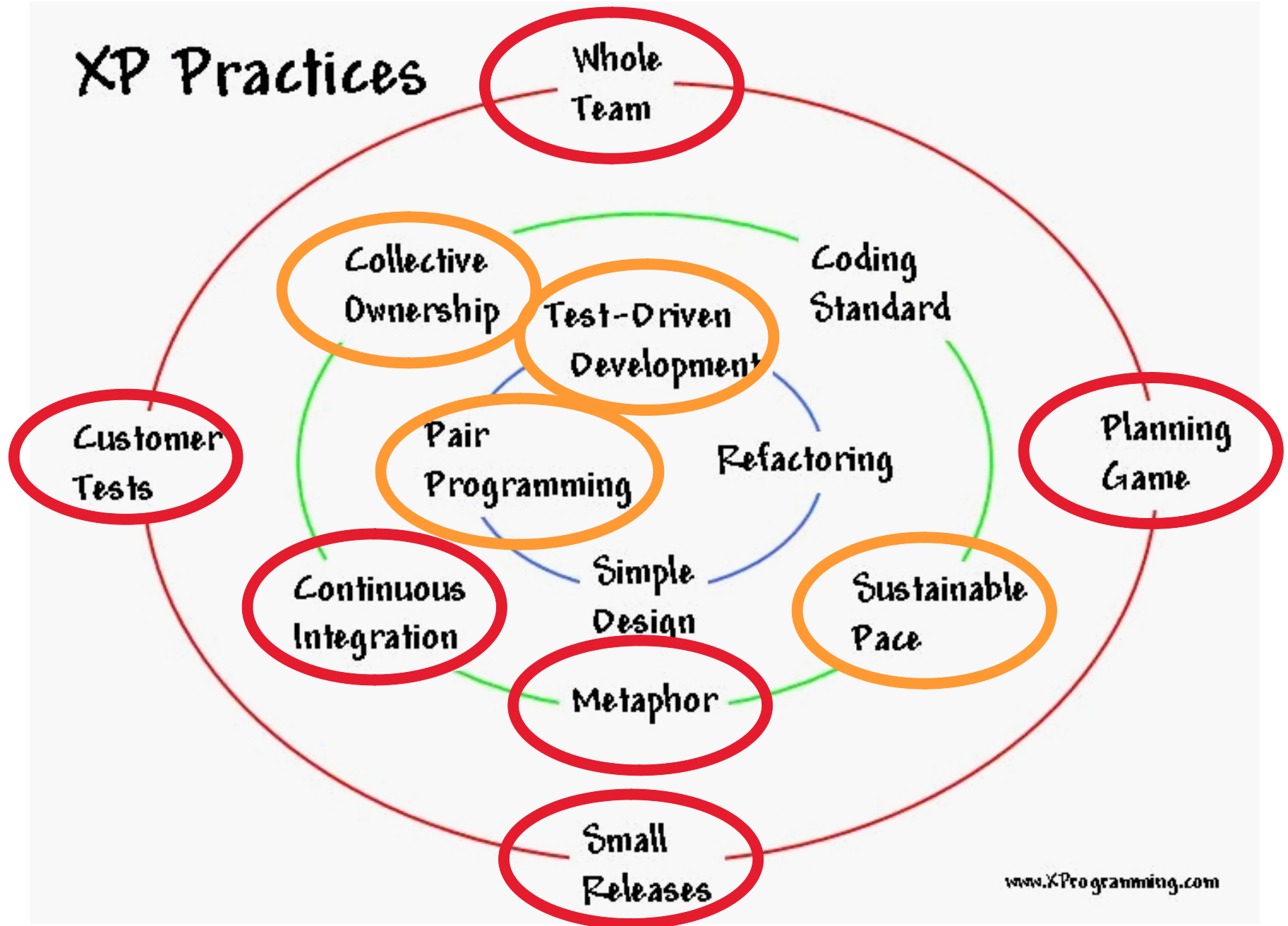
- Tägliches Treffen mit dem Team (Daily Scrums)
- Beseitigt Hindernisse
- Hilft dem Team, sich weiter zu entwickeln und seine Ziele zu erreichen
- „Schäferhund in der Schafherde“



# Multi-Team Scrum

- **Ein** gemeinsamer Backlog, der von PO's mit priorisierten Projekten befüllt wird
- Jedes Projekt enthält n E2E User Stories. Projekte werden Teams entweder durch Push oder Pull zugewiesen
- Jedes Team arbeitet autonom an seinen User Stories
- Teamkoordination über TechBoard
  - jedes Team entsendet Vertreter
  - Lösung teamübergreifender Probleme (z.B. Infrastruktur)
  - Entscheidet über Guidelines
  - Architekturplanung

# XP Practices



# Multi-Team Scrum bei BE Infonova

218202	<b>AAPT 6.1 Upgrade: Customisations</b>	in Progress	8830
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**contained User Stories:**

ID	Name	Story points	State	Scrum Team	Planned Sprint	Importance
218711	AAPT 6.1 Upgrade: Customisations: Optimize XML Invoice generation process (Part 2: Performance improvements)	8	in sprint backlog	Lisa	23	30

218019	<b>Harmonize Ordermanagement</b>	in Progress	Dafür	8100
--------	----------------------------------	-------------	-------	------

**contained User Stories:**

ID	Name	Story points	State	Scrum Team	Planned Sprint	Importance
217947	Implement a functionality to make a workflow step configurable via the Rule Engine (Harmonize OM)	3	Ready for demo	Dafür	23	13987
217999	Implement a possibility to define a SLA time for a workflow (Harmonize OM)	3	in sprint backlog	Dafür	23	13985
218000	Implement a workflow waiting step and the possibility to define maximum number of retries (Harmonize OM)	2	in sprint backlog	Dafür	23	13983
217945	Implement the capability to define the sequence of sub workflows via main workflow (Harmonize OM)	3	in sprint backlog	Dafür	23	13970
217944	Implement the possibility to order a DSL service (Harmonize OM)	5	in sprint backlog	Dafür	23	13950

218028	<b>Wholesale Invoice - complete with orders and interface usage</b>	in Progress	7000
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**contained User Stories:**

ID	Name	Story points	State	Scrum Team	Planned Sprint	Importance
218936	Define and store pricing for Bureau Activities	2	Accepted	Scrat	23	13500
219261	Charging bureau activities - Phase 1 - Implement Java Interface for EDR processing	3	in sprint backlog	Scrat	23	13420
219263	Charging bureau activities - Phase 2 - Implement IMPEX Handler for EDR processing	3	in sprint backlog	Scrat	23	13410
219083	Charging bureau activities - Phase 3 - Mediation and Rating checks & changes	3	in sprint backlog	Scrat	23	13400

218259	<b>Release INFONOVA R6.1</b>	Assigned	Dagegen	6500
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**contained User Stories:**

ID	Name	Story points	State	Scrum Team	Planned Sprint	Importance
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MKS ID: 217947

Backlog Item:

Requestor: **Hochegger**

# Implement a functionality to make a workflow step configurable via the Rule Engine (Harmonize OM)

- [n/a]  Requirements reviewed/updated
- [true]  Architecture cross-check
- [true]  Design cross-check
- [true]  Acceptance criteria tests reviewed and green
- [true]  Code reviewed (guidelines, reusability, best practice, ...)
- [true]  Asset Artifacts reviewed/updated

[Ready for demo] User story state in MKS

## TRS Project

"2114937w1112\_INFONOVA PRODUCT DEVELOPMENT 6.2 (2009): Harmonize Order Management"

## How to demo

1. Configure a rule for a workflow step
2. Invoke the example workflow
3. Show the fired rule and the decision

## Acceptance criteria

- + Example workflow is running
- + The example workflow includes a step where the rule engine will be invoked and a rule will be fired
- + New step instead of the decision
- + Show the possibility to configure a rule via database
- + Order page provides check box for Self Installation or Professional Installation used for the decision

## Comments

with Tasks, SLA, Retries,...

Importance

13987

Estimate (points)

3

Total Effort (h)

Team

Dafür

USER STORY















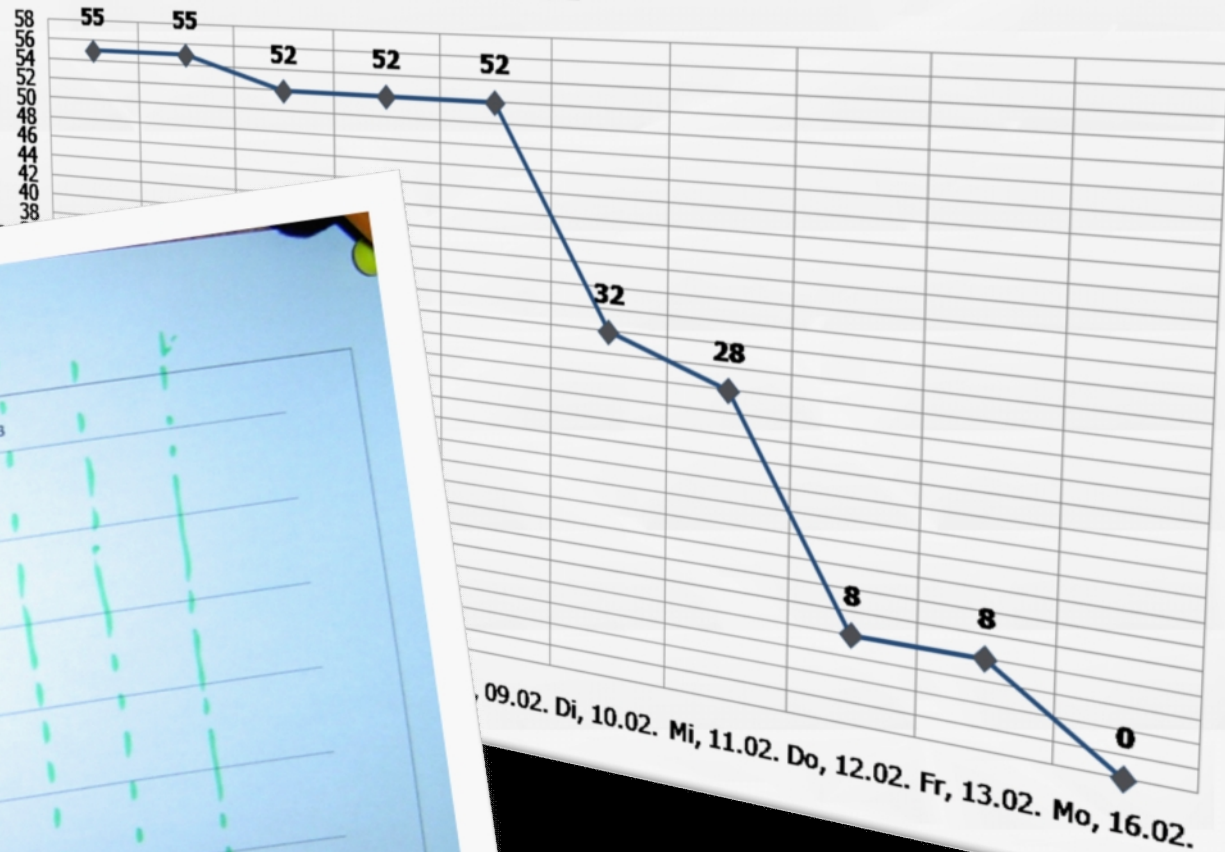


Scrum Board



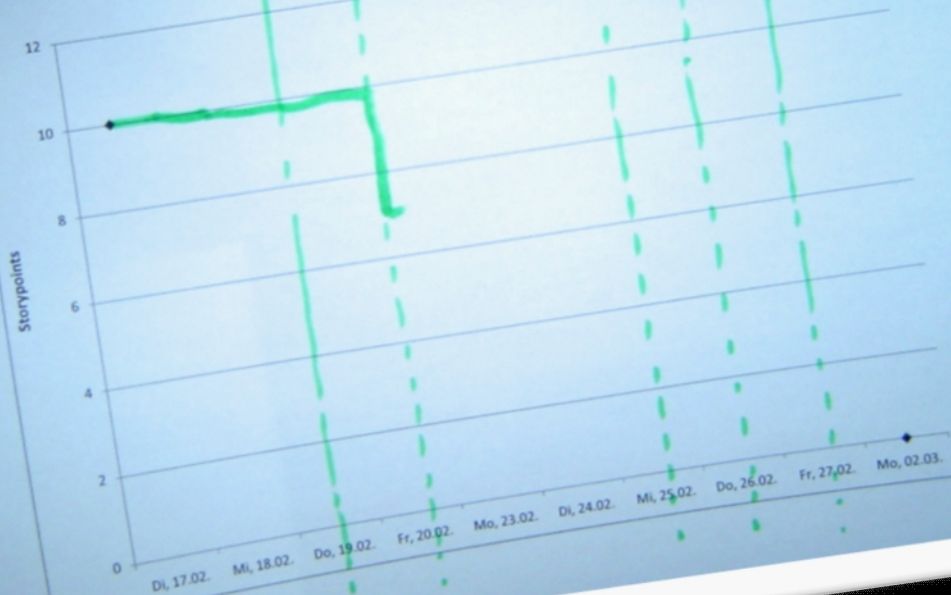
Daily Scrum

## Burn Down Graph - Team Scrubs - Sprint 200903



SP 23

### Burndown Graph - Team Dagegen! - Sprint 23





Velocity Graph - Team Scrat









Retrospektive









**Cross-funktional**

MKS ID: 217947 Backlog Item: Requestor: Hoegger

**Implement a functionality to make a workflow step configurable via the Rule Engine (Harmonize OM)**

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- [true] Architecture cross-check
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Comments  
with Tasks, SLA, Retries,...

Importance
<b>13987</b>
Estimate (points)
<b>3</b>
Total Effort (h)

Team  
Dafür

**End to End**



**Wissenstransfer**



**Abnahmen & Demos**

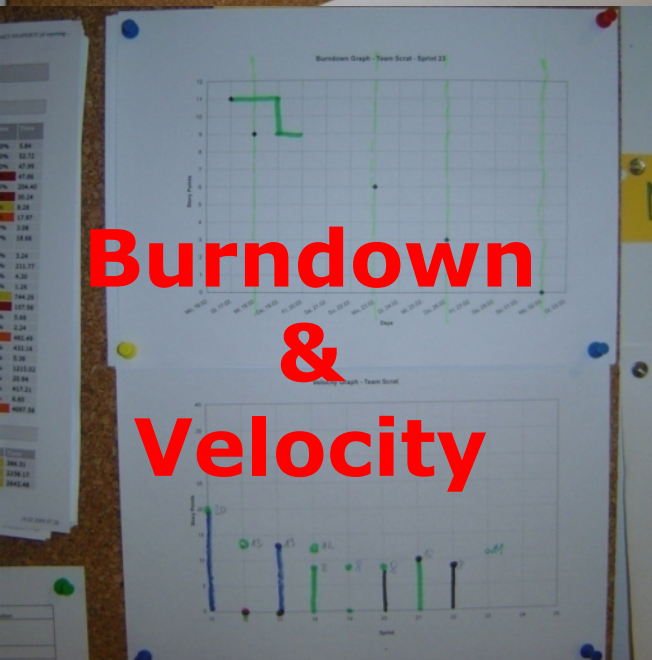




# Scrum Boards



# Continuous Integration



# Burndown & Velocity



# Abnahmen & Demos



# First Things First







# Spätes Testen



## 218202 AAPT 6.1 Upgrade: Customisations

### contained User Stories:

ID	Name
218718	AAPT 6.1 Upgrade - Customisations: Optimize XML Invoice generation process (Performance improvements)

## 218019 Harmonize Ordermanagement

### contained User Stories:

ID	Name
217947	Implement a functionality to make a workflow step configurable via the Rule Editor (Harmonize OM)
217999	Implement a possibility to define a SLA time for a workflow (Harmonize OM)
218000	Implement a workflow waiting step and the possibility to define maximum number of retries (Harmonize OM)
217945	Implement the capability to define the sequence of sub workflows via main workflow (Harmonize OM)
217944	Implement the possibility to order a DSL service (Harmonize OM)

## 218028 Wholesale Invoice - complete with orders and interfaces

### contained User Stories:

ID	Name
218936	Define and store pricing for Bureau Activities
219261	Charging bureau activities - Phase 1 - Implement Java Interface for EDR product
219263	Charging bureau activities - Phase 2 - Implement IMPEX Handler for EDR product
219083	Charging bureau activities - Phase 3 - Mediation and Rating checks & charging

# Product Backlog



# Zusammenfassung

# Zusammenfassung

- Demo-System
- Tasks im Daily Scrum
- Gemeinsame Sicht
- Gruppendynamische Effekte
  - Backlog alle 2 Wochen
  - Täglich Tasks
  - Retrospektiven
  - Probleme schnell behebbar
  - Keine Verschwendung
  - Das Wichtigste zuerst
- Ausfallsicherheit
- Höherer Durchsatz





# BearingPoint Infonova



Live Search Maps - Microsoft Internet Explorer provided by BearingPoint Inc.

graz Search Maps Web

Businesses People Collections Locations

Welcome Directions Collections

Share Print

2D 3D Road Aerial Bird's eye Labels Traffic

Infonova gegründet 1989  
+300 Mitarbeiter in Österreich  
+250 Mitarbeiter in Graz

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Code of Conduct Developers About Help Account Feedback

Done Internet

# Major clients



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# Discussion





**Infonova**  
**Truly Transformational Solutions**