Surviving SOX with Scrum

Integrating Scrum in IT Governance at Allianz

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http://scrumcenter.com

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Who are we?

Simon Roberts and Christoph Mathis

Independent Scrum coaches and trainers; Scrum since 2002, light-weight methods since late 1990s

Both have a strong software engineering background

Track record of successful Scrum projects for small, medium and large enterprises in Germany and the UK

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What are we going to talk about?

- Scrum @ Allianz Germany
- Potential impediments
- The governance landscape
- What is SOX?
- Why might it be important for your company?
- Potential conflicts
- What requirements does SOX place on IT?
- How does Scrum help?
- Examples
- Summary

Scrum - Eine Reise

Scrum @ Allianz
A Holistic Approach

- We have been engaged in a Scrum transition at Allianz Germany for the last 2 years
- For us, Scrum in the Enterprise includes at least:
  - How to transition to Scrum and sustain its use through change management
  - How to integrate with IT governance
  - How to help teams, Product Owners and Scrum Masters to realize their potential
- Today we want to talk mainly about integrating Scrum with IT governance but first lets take a look at our enterprise Scrum approach in a little more detail ...

Sponsor

Initiate
Hire outside help

Ignite
Light the first beacon

Diversify
Light further beacons

Promote
Achieve executive buy-in

Professionalize
Create a center of excellence

Establish
Light even more beacons

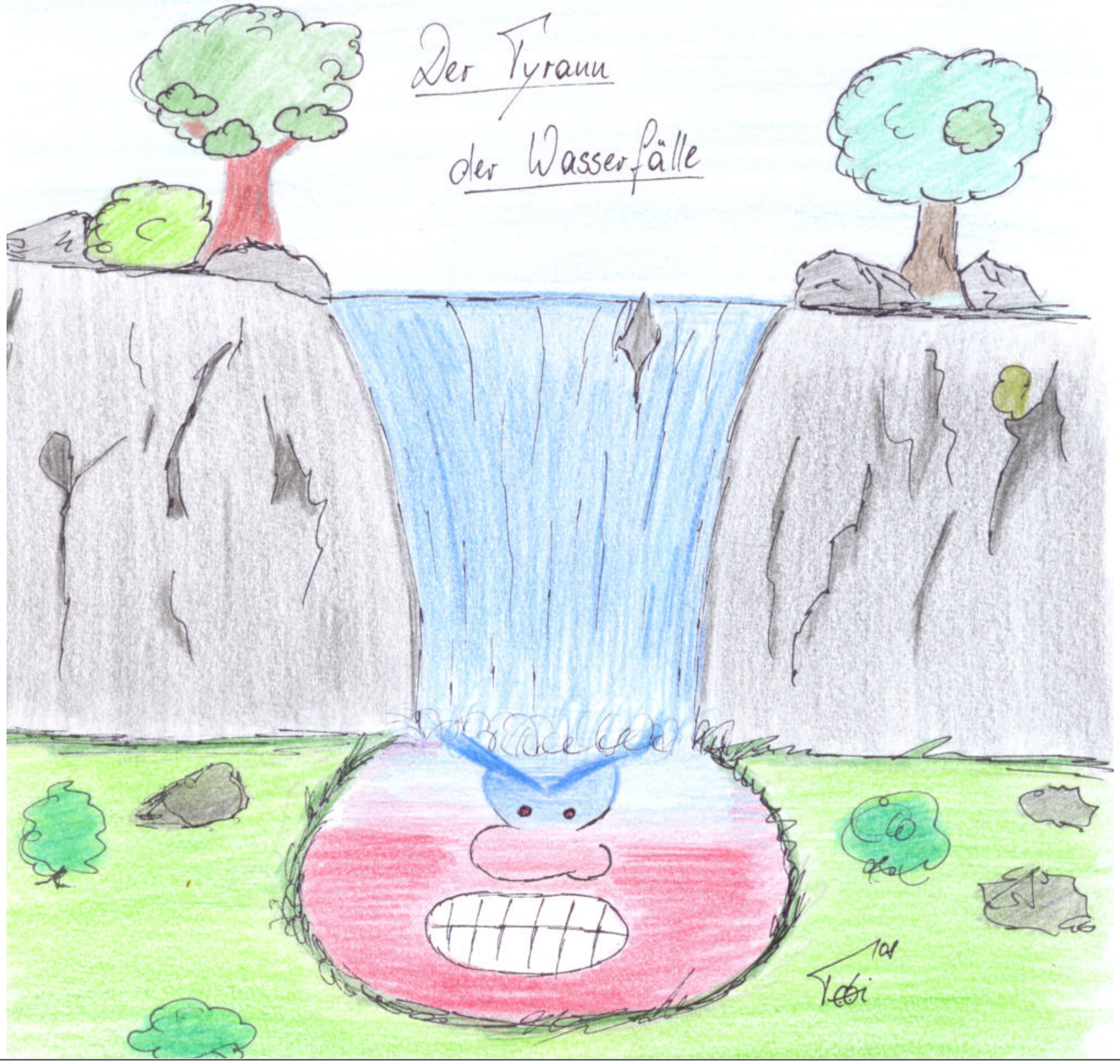
Consolidate
Initiate an Enterprise Transition process

Integrate
COBIT, CMMI, SOX

Scrum in the Enterprise

Some typical and some not-so-typical impediments

Der Tyrann der Wasserfälle



Das Command-und-Control-Monster

Der Vogel Strauß der Prozesse

Der Methoden-Zauberer

The Enterprise Scrum Governance Landscape

What is SOX?

- Sarbanes-Oxley Act
- Technically a U.S. law from 2002 which is intended to ensure the reliability of financial statements of public companies
  - in the wake of the scandals around Enron, WorldCom and others
  - New: the leaders of an organization are personally responsible for compliance and for the correctness of financial statements
- SOX 404 (the part most important for IT):
  - Public companies must introduce strict internal controls
  - They must document these controls
  - guarantee that they are followed
  - test their design
  - test their effectiveness

The History of Compliance in the USA

- 1933: SEC (Securities and Exchange Commission) and GAAP (Generally Accepted Accounting Principles)
  - introduced after the depression of 1929
- 1985: Treadway Commission
  - after a series of financial scandals, the Treadway Commission (named after James Treadway, former chairman of the SEC) brought together leading accounting organizations:
    - FEI (Financial Executives International)
    - AAA (American Accounting Association)
    - AIPCA (American Institute of Certified Public Accountants)
    - IIA (Institute of Internal Auditors)
    - IMA (Institute of Management Accountants)
  - this became known as COSO (Committee of Sponsoring Organizations of the Treadway Commission)

Why might SOX be relevant for your Organization ?

- If you have a US listing
- If you need access to the capital markets
- SOX is becoming a de facto standard outside the US
- Analysts increasingly include IT governance in their rating of an organization, which can have an effect on stock price
- The EU Commission is going in a similar direction with their focus on the CobiT framework
- The financial crisis will likely result in stricter controls

Cost of SOX

- In the USA companies spend 6 billion US $ annually on SOX compliance activities

Potential conflicts with SOX

comply and die:
static business model

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comply and die:
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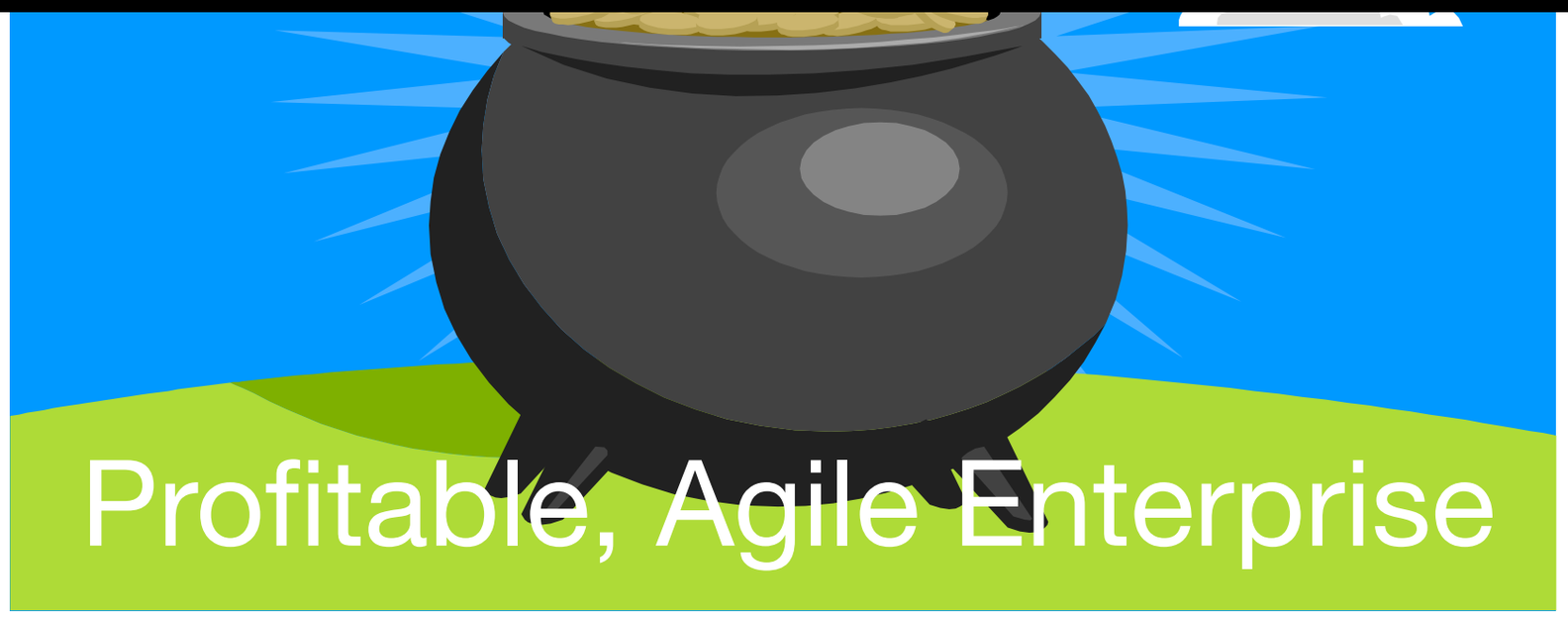
non-compliance
penalties



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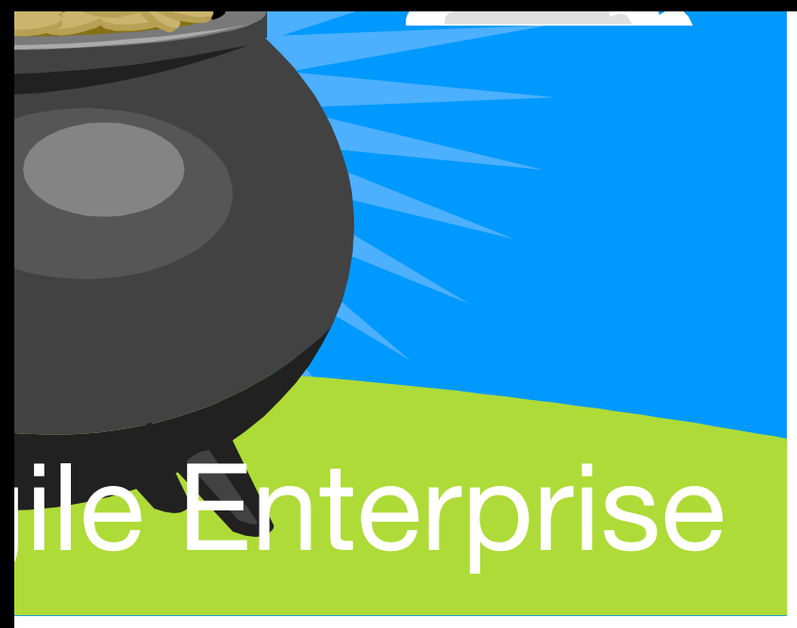


inefficient processes

icts with SOX

comply and die:
static business model

non-compliance
penalties

inefficient processes

high compliance costs

What Requirements does SOX place on IT?

- Important SOX relevant controls of the CobIT Framwork include
- Defined Development Process
- Defined Deployment Process
- Prevention of Manipulation (Segregation of Duties)
- Performance Management
- User Documentation
- Testing
- Versioning and Archiving

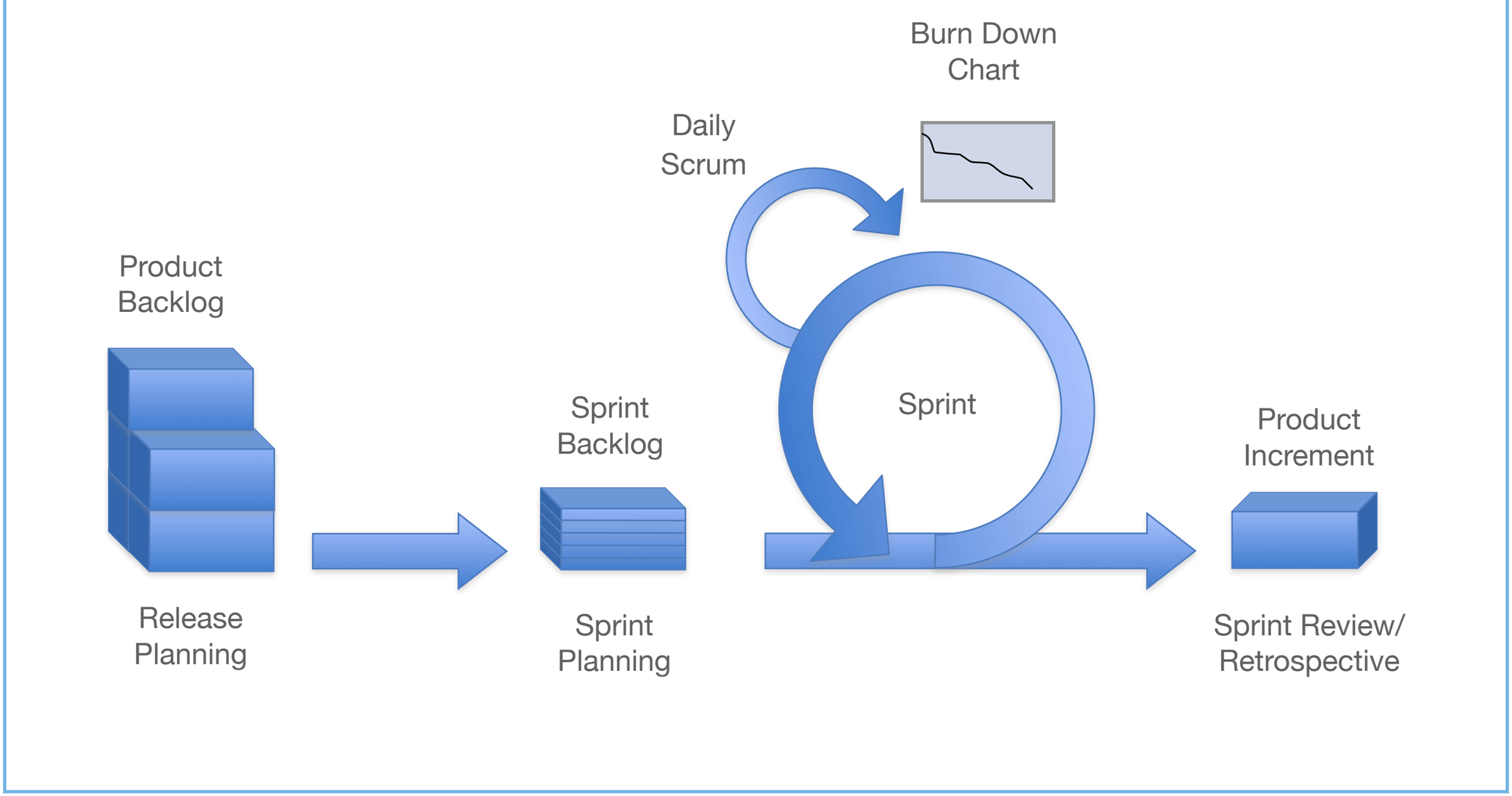
SOX Requirements and Scrum

Goal	Realization	Notes
Defined development process	Scrum is a defined framework which can form the basis of a defined process	Need to standardize practices
Defined deployment process	Integrate release decision making into Sprint review	Dual-key deployment
Prevention of manipulation	Additional user stories for some applications	Access rights for key data and acceptance-tested final code
Performance management	Resource allocation at the technical level	Need to guarantee that financial information is produced in a timely manner

SOX Requirements and Scrum

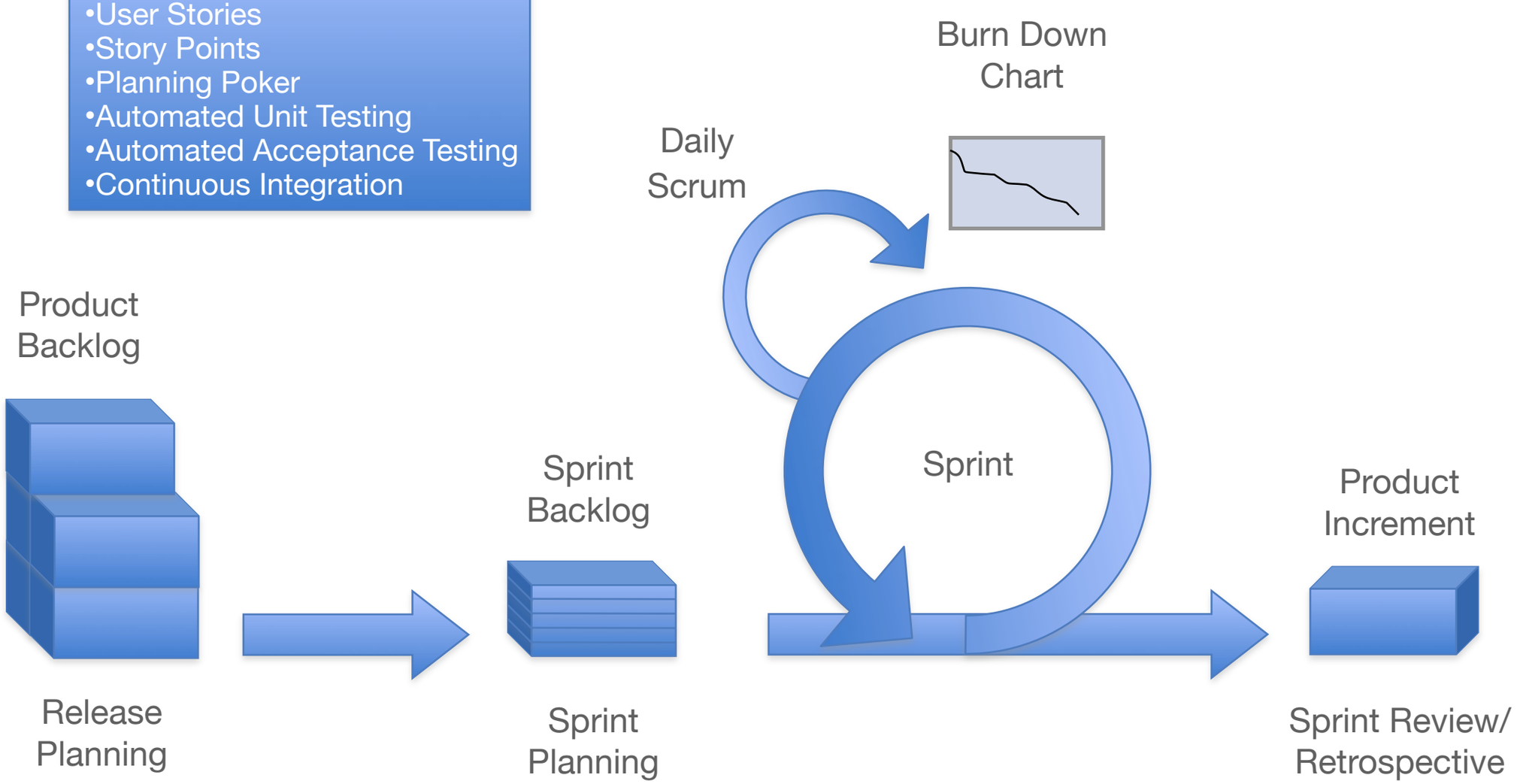
Goal	Realization	Notes
Testing	Automated testing, test definitions and reports securely archived	Possible to leverage continuous build and test system
Documentation for Users	Additional acceptance criteria for user stories or additional user stories	The documentation that SOX requires becomes part of the definition of done
Versioning and Archiving	Has an impact on the configuration management systems that we use and introduces additional requirements on applications that we can represent as user stories	Need to archive productive program versions and balance relevant data for at least 10 years

Defined Development Process



Defined Development Process

Standardized Practices:
- Project Charter
- User Stories
- Story Points
- Planning Poker
- Automated Unit Testing
- Automated Acceptance Testing
- Continuous Integration



User Stories for SOX Relevant Projects (1)

User Stories for SOX Relevant Projects (1)

Auto Insurance Discount

As an insurance agent

I want to be able to offer a potential customer a discount

so that I have a better chance to be competitive and win her business

Acceptance Criteria

- Discount input as percent from a fixed set of options in a drop down list
- Check discount is displayed correctly in policy summary and that premium reflects discount
- Check discount value transmitted to mainframe correctly
- Check mainframe receives correct value
- Check DB timestamp and "who altered" flags set correctly

User Stories for SOX Relevant Projects (2)

List of Discounts Awaiting Approval

As a discount approver

I want to see a list of discounts waiting for approval

so that I can get the information that I need to control my discount budget

User Stories for SOX Relevant Projects (2)

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As a discount approver

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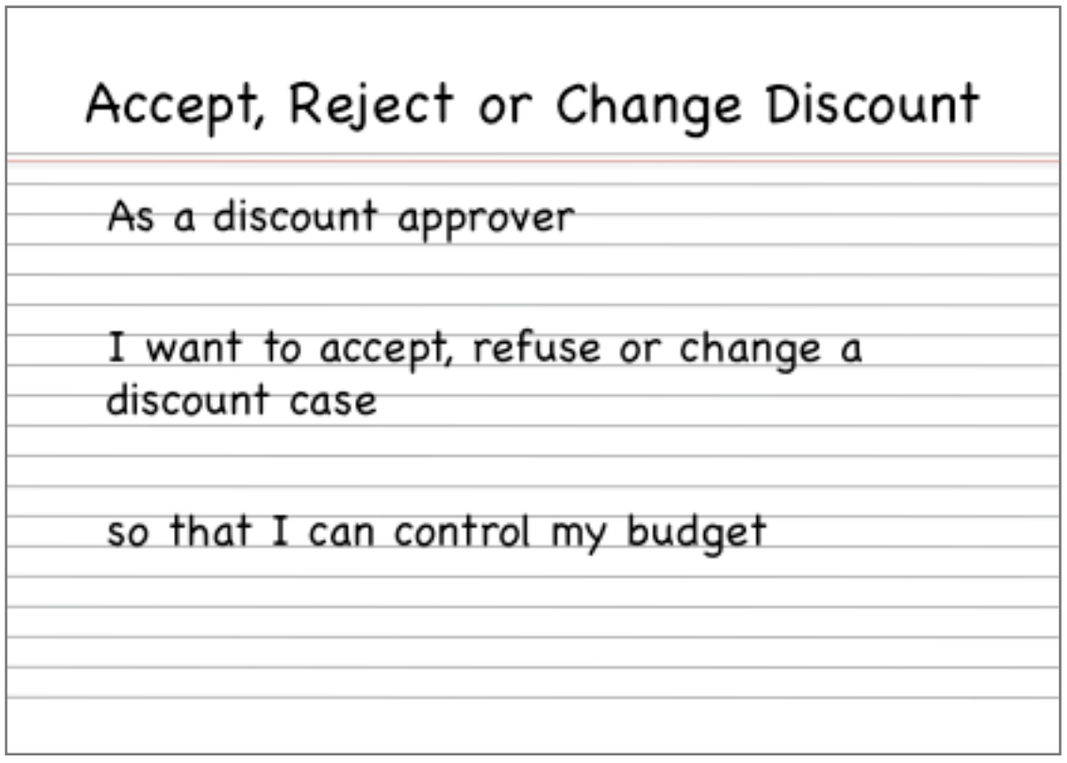
Acceptance Criteria

- Monetary impact of discount visible?
- List of open discount cases visible?

User Stories for SOX Relevant Projects (3)



User Stories for SOX Relevant Projects (3)

Accept, Reject or Change Discount

As a discount approver

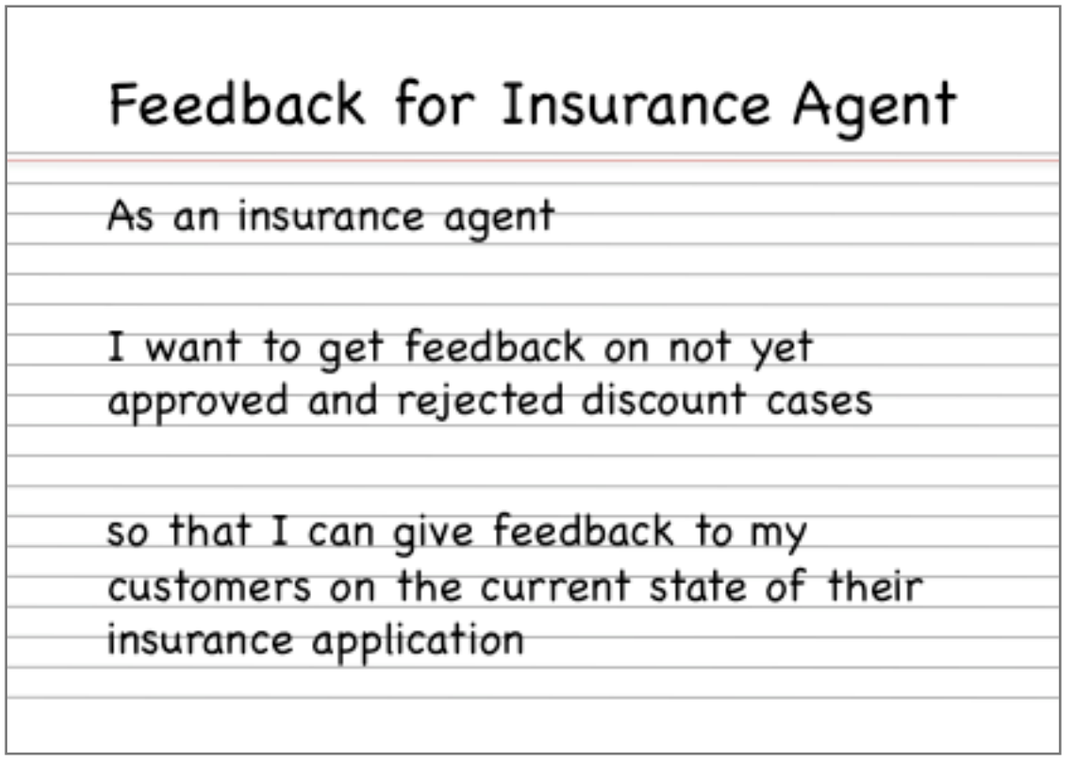
I want to accept, refuse or change a discount case

so that I can control my budget

Acceptance Criteria

- Accept a discount – check DB updated accordingly
- Refuse a discount – check DB updated accordingly
- Change the amount of a discount – check DB updated accordingly
- Check processed entries are removed from the list
- Check that same entry can't be processed by two different approvers at the same time
- Check printed contract reflects changes made
- Check mainframe gets new information correctly

User Stories for SOX Relevant Projects (4)



User Stories for SOX Relevant Projects (4)

Feedback for Insurance Agent

As an insurance agent

I want to get feedback on not yet approved and rejected discount cases

so that I can give feedback to my customers on the current state of their insurance application

Acceptance Criteria

- Check that rejected discounts are displayed as rejected in the list
- Check that not yet processed discounts are displayed in the list
- Check that only the discounts cases for this particular insurance agent are displayed

User Stories for SOX Relevant Projects (5)

Only Approvers Can Approve

As the SOX Controller

I want to ensure that only users with the "approver" permission can approve a discount case

so that I can ensure that other users cannot manipulate balance relevant data

User Stories for SOX Relevant Projects (5)

Only Approvers Can Approve

As the SOX Controller

I want to ensure that only users with the "approver" permission can approve a discount case

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Acceptance Criteria

- Check that that a user without this permission cannot approve discounts
- Check that a user with this permission can approve discounts
- Check that the system logs attempts to approve without having this permission (in DB)

Test Cases

AmkraftonlineHostSuiteTest

	Test Case
✖	testNissan

```
                junit.framework.ComparisonFailure: expected:<...64...> but was:<...52...>
        at junit.framework.Assert.assertEquals(Assert.java:81)
        at junit.framework.Assert.assertEquals(Assert.java:87)
        at de.allianz.automotive.selenium.tarifrechner.NissanTest.performTestKomplettkennzeichen
        at de.allianz.automotive.selenium.tarifrechner.NissanTest.testNissan(NissanTest.java:39)
```

✔	testPeugeot
✔	testFiatLkw
✔	testOpel
✔	testPortal404
✖	testErstberater

```
                com.thoughtworks.selenium.SeleniumException: ERROR: There was an unexpecte
        at com.thoughtworks.selenium.HttpCommandProcessor.doCommand(HttpCommandProcessor.java:73
        at com.thoughtworks.selenium.DefaultSelenium.windowFocus(DefaultSelenium.java:442)
```

Continuous Integration with Automated Acceptance Testing

Continuum, Maven and Selenium

Summary

- You might need to be SOX compliant even if your company does not have a US listing
- SOX and Scrum can coexist
- Some of the agile practices such as automated testing and user stories can help to make SOX compliance less painful
- For larger organizations, strict IT governance is unavoidable. Agile methods can help

… just one more thing

The key challenge is

Compliance
whilst
Activating Innovation