



From Testers Self Defense to SPICE- Introduction of Processes at UC4

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Agenda



- **Introducing UC4**
- **Development in former times or „It was that easy when we were small“**
- **Creating & Implementing processes effectively – using the innate process thinking of technicians**
- **Happy developers, happy testers – „THE RESULTS“**
- **Going on: aligning processes in different cultures**
- **Going on: our way to lean processes and level 3**
- **Summary**
- **Q&A**

Introducing UC4



- **Austrian software company specialized in workload automation**
- **About 270 employees worldwide**
- **Development in Austria and in the USA**
- **About 1600 customers (e.g. eBay, GE, Pfizer)**

Development in former times



- **Development was responsible for the whole life cycle**
 - **Only few people involved, short communication channels**
 - **Short development lifecycle**
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- **Success of company lead to growth and diversification**
 - **Creation of independent Product Design and QA departments**
 - **Typical problems in communication and quality arose due to the above mentioned developments**



- **From a QA perspective the following problems were observed**
 - Incomplete specifications → if it is not specified, everything might be correct
 - Lot of rework, as requirements and implementations needed to be adapted during development → frustration for developers and testers as well
 - Late involvement of QA → inefficient defect removal
- In order to fulfill its task, QA asked for changes in the development lifecycle. Developers were also eager to get rid of the high rework workload and better guidance during development**

Effective Process Creation



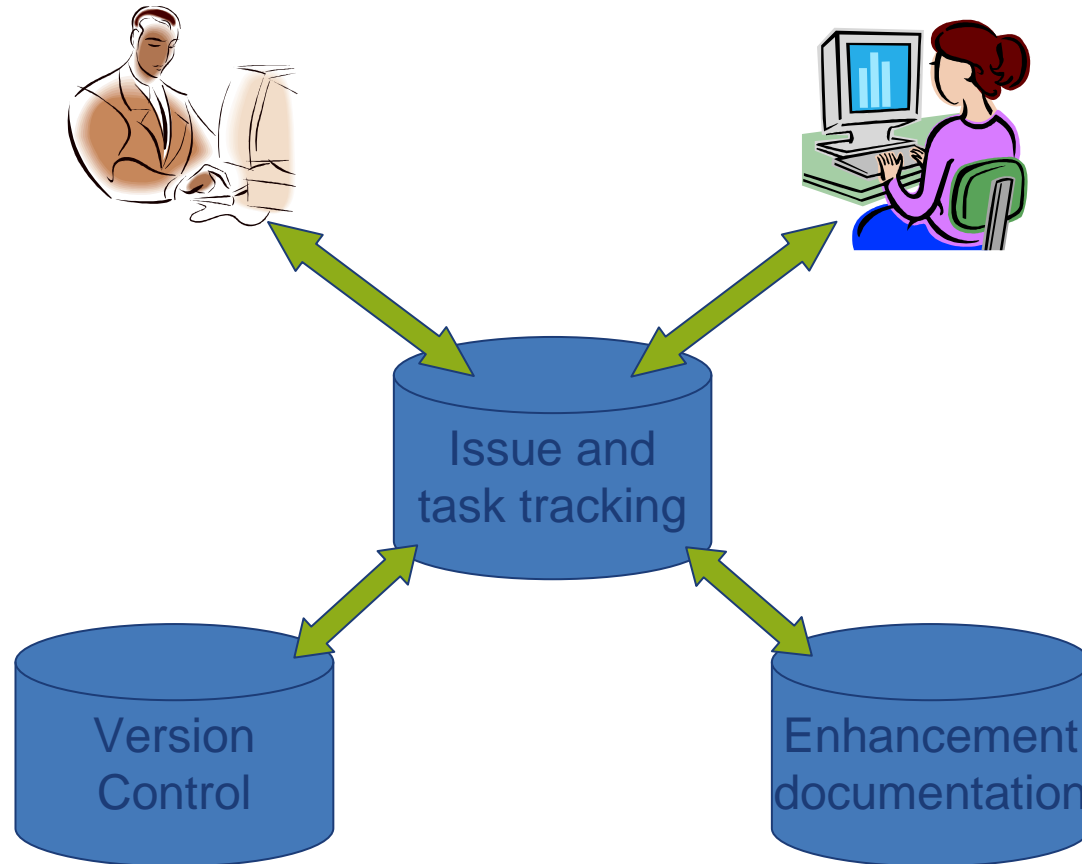
- **Workshop with developers and QA engineers was held with the following agenda**
 - How will our product lifecycle look like?
 - What do we need to do our work?
 - How do we get there?
- **Using the innate process thinking of technicians enabled us to lay out a new development process within 2 days**
- **As the driving force was quality of work, the resulting processes focused on verification and traceability**
- **As every technician had a voice in the creation of the processes, the acceptance was high from the very start**

Effective process implementation



- **The processes were implemented using the task tracking system in place**
 - **Deployment was easy, as all persons concerned were present at creation**
 - **Documentation was small -> processes for the whole development took less than 20 pages to describe**
 - **Definition of necessary document templates was done within 4 weeks**
- **small overhead, large acceptance, fast deployment**
- **But, if there is nearly no documentation, how does it work?**

The value of integrated task tracking



- Every task of an enhancement lifecycle is documented and tracked
- Every issue and its resolution is documented and tracked
- Project communication is done via Task tracking system
- Every code change is logged in version management and task tracking system
- Specs and test logs are saved within task tracking system

No need for a model



- **Do you realise what we did NOT do?**
 - **We did not choose any process model at that time**
- You do not need any model to improve your processes, you need to know your business**

Measuring it – The first SPICE Assessment



- **One year into living the process a first assesment was done.**
- **SPICE was selected as basis**
- **Focus on engineering process group**
- **The result was surprisingly positive, especially considering the short implementation time**
- **The assessed engineering processes were consistently at level 2**
- **WHY?**

Get level two for free



- **Consistently performing task and issue tracking enables you to fulfill the level two requirements for**
 - Traceability
 - Documentation
 - Planning
 - Reporting
- **As these are just „best practices“ of development, which are widely and easily accepted, you can reach a SPICE level 2 in these process areas quite easily**

Happy developers



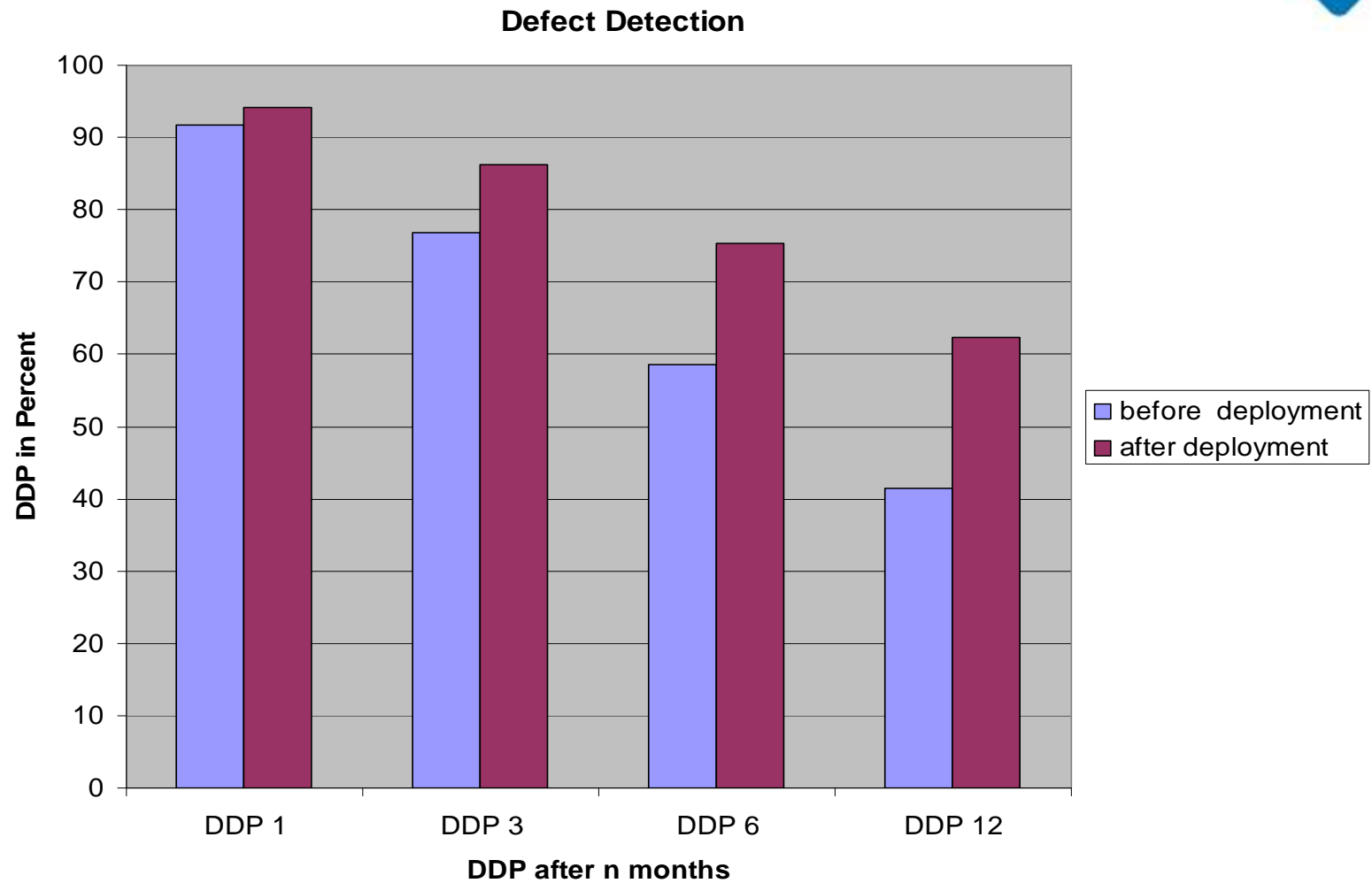
- **The reaction to and acceptance of processes is very positive. Typical attitudes of developers are now:**
 - If it ain't specified, I don't want to develop it
 - Give me a spec, I give you a date
 - No task, no code
 - No ticket, no change

Happy Testers



- **We do know by now, what is right and what's not**
- **We can start early in the development process**
- **The quality of our product is higher**

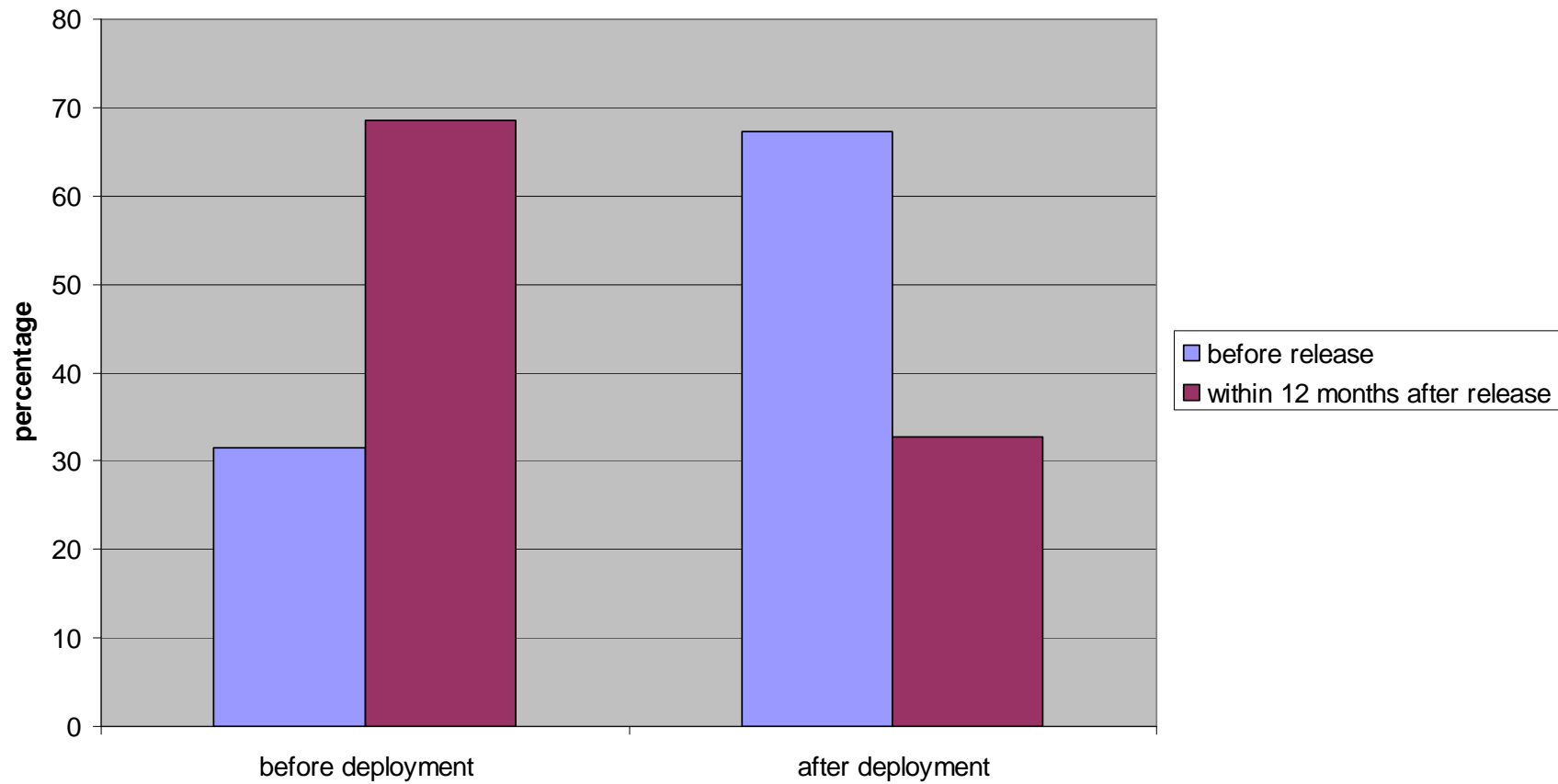
Measurable Results



Measurable Results



Critical issues found



Measurable results



- **Significant improvement of defect detection percentage, although the project after process deployment was more complex**
- **Significant reduction of critical issues found after Release**
- **General shift in the defect distribution to lower severity**

It's not always that easy



- **Regular process checks and update meetings were defined in the first place**
- **First update meeting held after a full release cycle**
- **The setup was designed top down, with presentation of changes, identified issues, etc.**
- **People did not get involved. Compliance to these changes was not as good, as with the first process deployment**

Aligning Processes



- **Processes described were developed in Austria for Austria**
 - **Merger with a more or less equally sized company in the US produced a company with two very different development centers**
 - **Two different ways of working have to be aligned**
- **Biggest problem: Nobody likes CHANGE!**

Aligning processes – Identify the need and relieve the pain



- **Process deployment scares people, who were not involved or reasonably well trained and informed**
- **Therefore necessity to find areas, where the need for processes is high**
- **The biggest pain could be identified in the development and testing processes (sic!). We found the same pain in the US company as we had before in Austria**
- **Still, as the product lifecycle is different and we have different corporate cultures, simply deploying our processes seemed unwise**

Effective process implementation (2)



- **Broad acceptance is the key for effective process implementation/deployment**
- **The best process designs wont be accepted, if the people involved do not feel heard and taken seriously („they do not understand our work“)**
- **Broad presentation of processes as well as „human readable“ documentation ensure overall transparency**

Characterization of Process design patterns



	implicit	explicit
Boss thing	intuitive	expert-oriented
collective	evolutionary/ random	Collective effort



Characterization taken from strategy design → also applicable to process design

(c) Dr. R. Nagel

→ The more collective the effort and the better communicated, the better the acceptance of the deployed processes

Our way to lean processes and level 3



- **To get to level 3 and to stabilize the processes we renew the process documentation according to process modelling guidelines**
- **A key factor will be to keep it „human readable“ and not too „academic“**
- **The model for documentation will be taken from Olson et al. (WCSQ 4), reducing the typical process documentation to approx. 7 info chunks and not more than 2 pages of description per process**

Summary



- **Process implementation can be done easily and effectively involving many directly affected stakeholders**
- **The compliance seems higher due to the development and deployment involvement of the stakeholders**
- **Making the advantage for everyone visible is a very effective way to overcome resistance against deployment**
- **A rather small effort can get a set of processes to level 2 rather easily and fast**
- **You do not need a process model to improve your processes**