

# „PLM Excellence“ Program

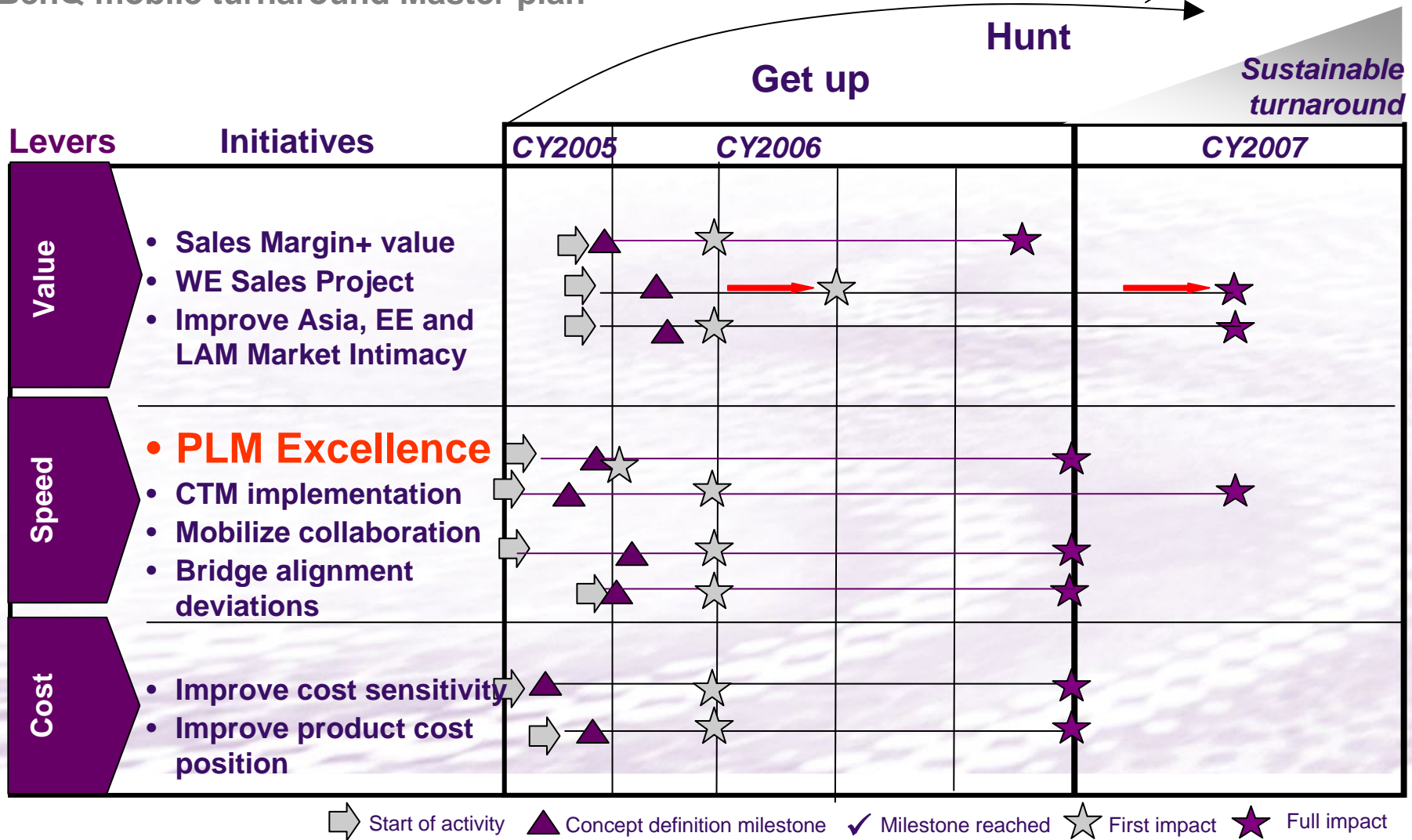
Dr. S. Bocionek, Dr. J. Eickholt  
BenQ Mobile PHE R&D

Munich, January 25, 2006

# Starting Point: The BenQ Turnaround Program

BenQ mobile turnaround Master plan

Expand territory →

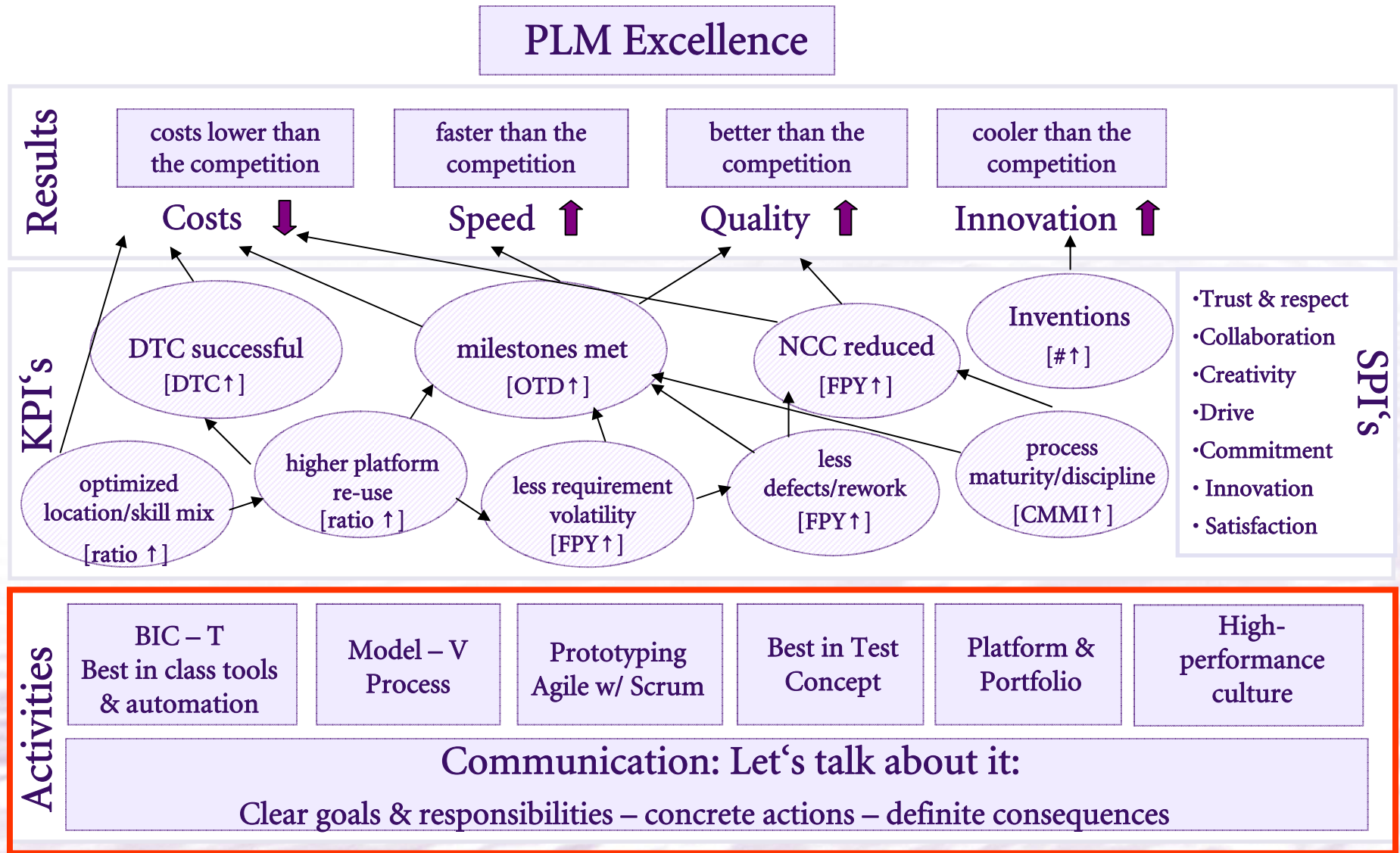


Preliminary,  
to be detailed

**BenQ**

# PLM-Excellence: Program Overview

# Program „PLM Excellence“: Driver Tree



# Program „PLM Excellence“: Summary

- Goals
  - **Improve** TTM, cost position, product quality and innovation position for all products on the roadmap
  - **Define quantified targets** (from benchmark considerations), and derive PKIs and objectives for the sub-organisations w.r.t. People – Process – Products - Projects.
  - **Launch series of specific improvement projects** to optimize whole PLM, not only the R&D org or PHE
  - **Start with PHE**, involve PHA later when results can be demonstrated
- Measures of Success (not final !!)
  - TTM for 80% of projects reached with less than 2 weeks deviation from plan
  - Cost position – 10%
  - Product quality + 20%
  - Innovation: tbd
  - Employees: 66% positive opinion in year 1
- Responsibilities
  - Steering board tbd: Eickholt, Lepold, else?
  - Coach: Eickholt
  - Overall program Mgr: Bocionek
- Reporting & Review
  - Monthly steering board meeting
- Program Schedule, next steps
  - Project sheet for each topic (incl. Quantified project objectives): CW 1, 2006
  - Project leader for each topic: CW 2, 2006
  - **Finalized driver tree, KPIs and mgmt objectives: 31-Jan-2006**
  - First steering board: end of Feb.
  - **R&D Mgmt Objectives 2006 (based on KPI's): early Feb. 06**

# Program „PLM Excellence“: Details

- **People: Motivation & Leadership**

- **Uniform Communication: „Quo Vadis PHE PD ?“**
- **High-Performing Culture**
  - LQA (leadership quality analysis)
  - Skill mix optimization
  - Commitment culture
  - Customer orientation (internal, external)
- **Collaboration**
  - Trust and respect
  - Team approach
  - Individual satisfaction

- **Process: Organization & Productivity**

- **Project Model-V:**
  - True V-model with complete horizontal responsibilities
  - PD QP organization
- **Best-in-class IT:**
- **Best-in-Test:**
  - Start with defect injection analysis
  - Consider 6-sigma improvement project
  - Performance test lab ??
- **Full agile transition of PHE PD & CPM**
  - Product backlog
  - Scrum teams
  - Sprint-based release plans
  - TDD (test-driven development)

- **Products: Innovation & Technologies**

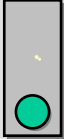
- **Platform and Portfolio stabilization [with CM, TPM]**
- **Platform re-use strategy [with CM, TPM]**
- **MD Quality increase**
- **Invent the future program**
  - Increase invention disclosures
  - Secure BenQ MP IP
  - Stimulate creativity
  - Generate fun
- **Thin Client phone**

- **Projects:**

- **Secure Polaris, Swift, Swan, Kestrel**
  - U2 initiative for each project
  - Agree on project backlog
- **Start me Up – Agile pilot projects (Ruby, Swan)**
- **RealApoxi – Clean Platform [with CM, TPM]**
  - Clean definition
  - Clean architecture
  - Clean release strategy
  - Clean toolkit usage concept

# Program Status

# PLM Excellence Program Status



**Project Sponsor:**  
Eickholt / Lepold ?

**Project Leader:**  
S. Bocionek

**Status:**  
January 25th, 06

## Objectives

- Improve TTM, cost position, product quality and innovation position for all products on the roadmap
- Define quantified targets (from benchmark considerations), and derive KPIs and objectives for the sub-organisations w.r.t. People – Process – Products - Projects.
- Launch series of specific improvement projects to optimize whole PLM, not only the R&D org or PHE
- Start with PHE, involve PHA later when results can be demonstrated

## Key KPIs

- See next page

## Achievements

- Program defined and accepted by mgmt team, tasks are assigned
- Kick-off for first two agile projects Jan 4/5, 06
- U2 method applied to 5 projects; measurements start Jan 26th

## Critical issues/open topics to be solved

- CM, TPM, RD need formal agreement on collaboration model within Agile Development projects
- CM/CPM needs to 100% utilize Doors requirement mgmt tool
- TPM needs to take ownership of Primavera tool for planning & controlling

## Required decisions from Steering Committee

n/a

## Next steps

Activity	Responsible	Date
• KPI's distributed	Bocionek/Klebsch	31-Jan-06
• Mgmt objectives derived	Bocionek/Klebsch	14-Feb-06
• U2 wallchart meetings	Faessler/Rudolph	26-Jan-06
• All hands R&D meeting	Bocionek	27-Jan-06

# PLM Excellence Project Status Overview: 20-Jan-06

Project, P-Leader	Status	Achievements	Critical Issues	Next Steps
Uniform Communication; <a href="#">Bocionek</a>		Concept „Quo Vadis R&D“ defined; accepted by mgmt team	n/a	All hands R&D meeting on 27-Jan-06
High-performing culture; <a href="#">Bocionek</a>		KPI's defined, baselining underway, targets to be set end of months	n/a	KPI targets ready 31-Jan Mgmt objectives 14-Feb
Model-V; tbd		n/a	n/a	Needs more discussions with BenQ QM; <b>SB drives</b>
Agile; <a href="#">U. Schmitz</a> , <a href="#">Faessler</a> , <a href="#">Rudolph</a>		Kick-off for Swan and Koala on Jan 4/5; Consulting supp. by ObjectMentor(OM)	Koala stopped; now Ruby & Gemstone; High consultancy cost	Scrum start Ruby 14-Feb OM offer agreed 14-Feb
Open for future use				
Open for future use				
Best-in-Test: <a href="#">Wacker</a>		Systemtest managers informed, goals partly defined	n/a	alignment with SW and Q, kick off in cw 4
Best-in-IT tools; <a href="#">J. Schmitz</a>		Kick-off done; Benchmarking started	Ressource & budget in ES dept. depends on concept tp be realized	Concept proposal ready in cw07
Platform & Portfolio; <a href="#">SB</a> + <a href="#">JE</a>		Good alignment meetings with CM in Dec. 05; needs continuation	Too little exchange of ideas so far (but there was Christmas)	QA'able Portfolio doc by Uwe Sydon due 31-Jan
Invent the future; <a href="#">Bauregger</a> , <a href="#">Hartm.</a>		Kick off meeting cw03	n/a	Status eval. start cw04 Target clarif. start cw04
cleanApoxi platform; <a href="#">Faessler</a>		Major goals identified	n/a	Team members to be named (Jan 06)
Thin client phone; <a href="#">Bauregger</a>		Overview of potential platform suppliers (HW/SW) started	n/a	Start Feature def. cw04 interdisciplin. team cw04
U2 projects; <a href="#">Faessler</a> , <a href="#">Rudolph</a>		Ongoing for Polaris, Swift, Swan, Kestrel; PL's named	n/a	Wallchart reviews start 26-Jan
Quality Up of MD; <a href="#">Thonauer</a>		PLM MD excellence program and KPI's defined	n/a	Track monthly KPI's

# Project Sheets



**People**

# Project „Quo Vadis PHE PD ?“: Bocionek

- Goals
  - Communication Campaign in PD
  - Increase confidence in mgmt
  - Increase knowledge & skills
  - Facilitate cross-dept interaction
  - Increase enjoyment
- Measures of Success
  - Employee opinion survey after 6 months (and annually after that)
  - Initial target: „66% positive“
- Responsibilities
  - Program Manager: Bocionek
  - Contributions: mgmt team, all
- Reporting & Review
  - Bi-monthly all hands R&D meetings
  - Employee opinion survey in summer 2006
- Project Schedule
  - Mgmt kick-off workshop: mid Jan 06 (done)
  - 1st all hands R&D meeting: end Jan. 06

## Project Status Summary: 20-Jan-06

- achievements
  - concept „Quo Vadis R&D“ defined
  - accepted by mgmt team
- issues
- support/decisions needed
- next steps
  - All hands R&D meeting on 27-Jan-06



# Project „High-Performing Culture“: Bocionek

- Goals
  - Establish **commitment-driven behavior**
    - Goal orientation
    - Realistic but aggressive plans
    - Clear action setting
    - Reliable delivery schedules
    - Accountability culture across teams
    - Service orientation towards internal customer satisfaction
  - **Skill optimization of mgmt & staff**
- Measures of Success
  - 75% of all KPI's reached in year 1
  - Work satisfaction > 66%
- Responsibilities
  - Program Manager: Bocionek/Klebsch
  - Mgmt coaching: Bocionek / Klebsch
- Reporting & Review
  - Mgmt summary: monthly by SB & WK
  - Ongoing KPI and „internal customer sat“ metrics
- Project Schedule
  - KPI's complete, and mgmt objectives finalized: end Jan 06
  - Mgmt kick-off workshop & first training: mid Jan 06
  - 1st task for all mgrs: work out PLM excellence projects: end Jan. 06
  - Performance monitoring: starts March 06
  - Satisfaction questionnaire: Sept 06
  - LQA / SMR: 1Q06

## Project Status Summary: 20-Jan-06 :

- achievements
  - KPI's defined, baselining underway, targets to be set end of months
- issues
- support/decisions needed
- next steps
  - **KPI targets ready 31-Jan**
  - **Mgmt objectives 14-Feb**



# Commitment defined as PHE RD KPIs: Targets 2006

draft

(tbd, final 31-01-06)

		Metric	Base 12/05	Target 12/06	Target 12/07
1 Financial	<ul style="list-style-type: none"> <li>R&amp;D costs (incl VAS, w/o Restruct)</li> <li>Cost productivity:                             <ul style="list-style-type: none"> <li>staff savings</li> <li>DTC savings (def. at M1)</li> <li>NCC savings</li> <li>Infrastructure savings</li> </ul> </li> <li>TTM cost overrun reduction</li> </ul>	Budget in Euro Target in Euro - Euro tbd - Euro / percent - Euro / percent - Euro absolut - Euro / percent	349'5 tbd tbd 12'1 / 9% tbd 21'4 23' / 18%	302'4 (FC345') tbd tbd 9% tbd 18'2 14%	300' tbd tbd 10% tbd 16'4 10%
2 Process	<ul style="list-style-type: none"> <li>Milestones Met</li> <li>Defect Rate in Sys Test</li> <li>Defect fix cycle time</li> <li>Requirement Volatility (starts April 06)</li> <li>Product TTM (M1 – DS)</li> <li>Process maturity</li> </ul>	OTD FPY CT FPY OTD CMMI level	60 days / 46d tbd next week tbd tbd 7% base 07/06	tbd tbd tbd tbd 6% tbd	> 90% < 2/cKLOC tbd < 10% < 5% / 2 weeks 3.0
3 People & Innovation	<ul style="list-style-type: none"> <li>Internal / external Mix</li> <li>High – low cost country mix</li> <li>Headcount</li> <li>Work satisfaction</li> <li>Invention disclosures</li> </ul>	Ratio Ratio int/temp+cons Rating 1 .. 5 goal 0.25/MA	43% / 57% 73% / 27% 1005/626+482 n/a 30/120	59% / 41% 58% / 42% 1152 / 819 2.25 180	70% / 30% 50% / 50% 1400 / 600 2.0 250
4 Customer	<ul style="list-style-type: none"> <li>Internal satisfaction / result quality</li> <li>External satisfaction</li> </ul>	Rating 1 .. 5 Rating 1 .. 5	n/a n/a	2.25 tbd	1.75 tbd
5 Else	<ul style="list-style-type: none"> <li>Agile successful in 4 projects</li> <li>Organisation prepared for full Agile</li> <li>Platform Strategy with CM + TPM</li> <li>Roadmap Process with CM + TPM</li> </ul>				

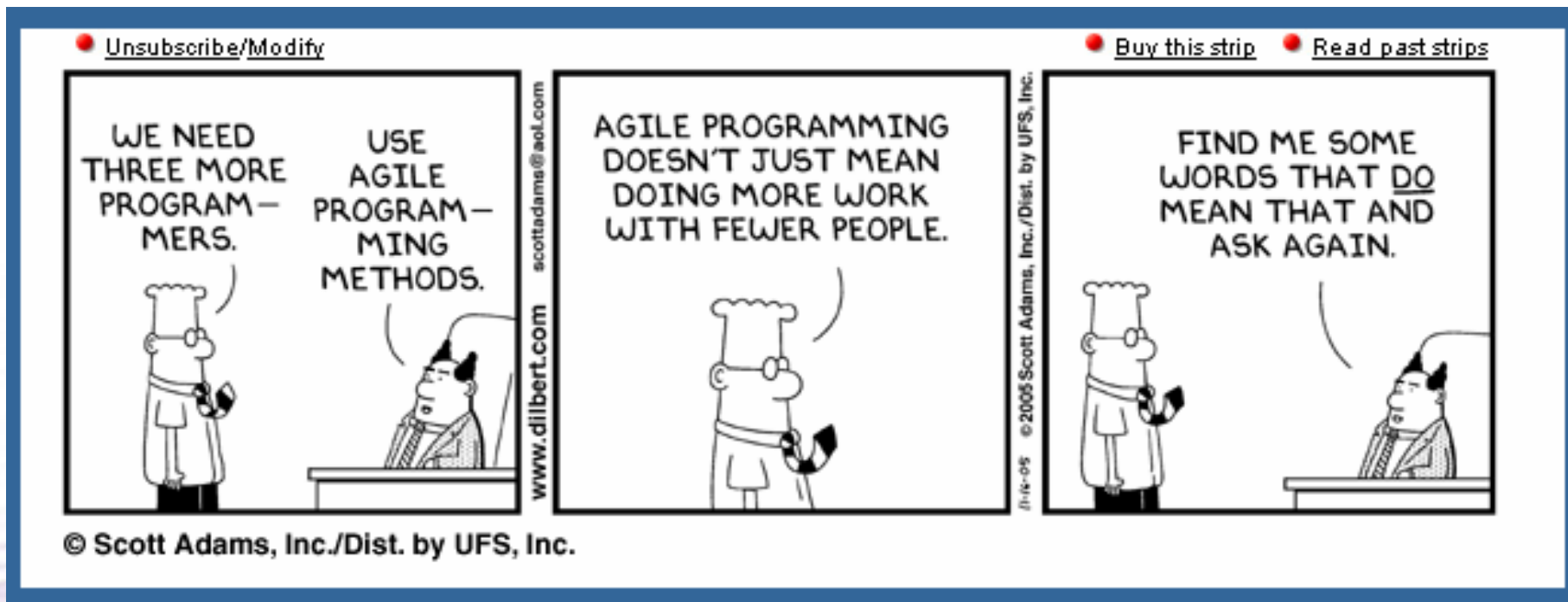
DTC = Design to Cost TTM = Time to Market FPY = First pass yield NCC = Non Conformance Costs OTD = On Time Delivery

Bocionek – Eickholt 2006/01/25 # 14



**Processes**

# The New Wave: “Agile Programming”



# Project „From Proto-Agile to Full Agile“: Uwe Schmitz

## • Goals

- Establish „Agile“ as standard software development process (mainly based on „Scrum“)
  - Iterative, time-boxed development
  - Test driven development (TDD)
  - Product backlog. Strong CPM involvement
  - Prioritized development
  - Sprint-based release plans
  - Transparent project status (Burndown charts)
- Prototype Agile in the Ruby and Gemstone projects
- Adjust organization as needed
- Adjust QMS as needed

## • Measures of Success

- Proto-agile projects led to successful TTM
- Readiness check of organization is > 70% (in Q4/2006)
- Product Backlogs created and agile teams defined for all projects in the year 2007 (end of 2006)

## • Responsibilities

- Coach: Dr. Bocionek
- Program Manager: U. Schmitz
- Project lead: Rudolph, Dr. Fässler, Dr. Wacker
- Project lead QA/QMS: Grein

## • Reporting & Review

- Proto-Agile within regular project reviews in the OPC
- Full transition: monthly mgmt report

## • Project Schedule

- Alignment with QM, CTM, TPM, SCM, SP, RD: SB, Jan 06
- Ruby and Gemstone ready to run Agile: 15.Feb 06
- Start full transition program: Sept. 06

## Project Status Summary:

### • Achievements

- Program Manager assigned 20.01. Uwe Schmitz
- **ObjectMentor (OM) kickoff done 04./05.01**
- KLF+MCH agile transition groups constituted

### • Issues

- Changed introduction focus (Ruby/Gemstone)
- Consultancy cost

### • support/decisions needed

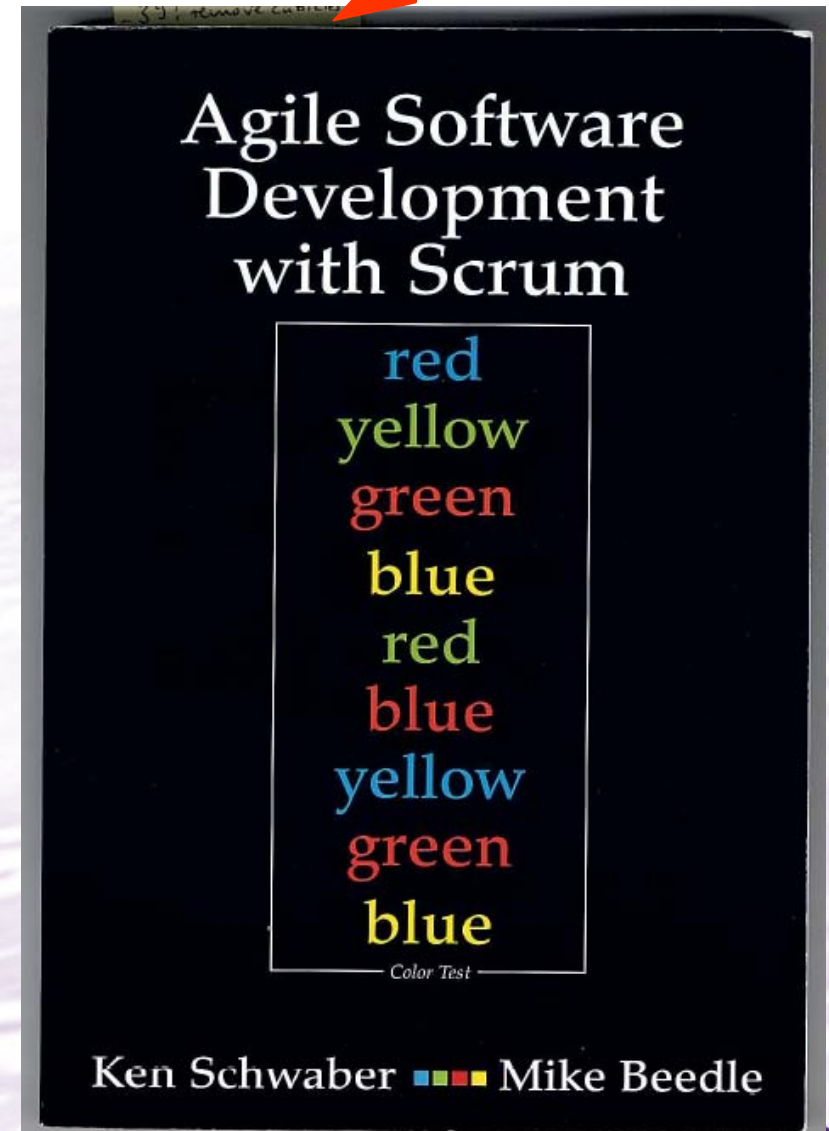
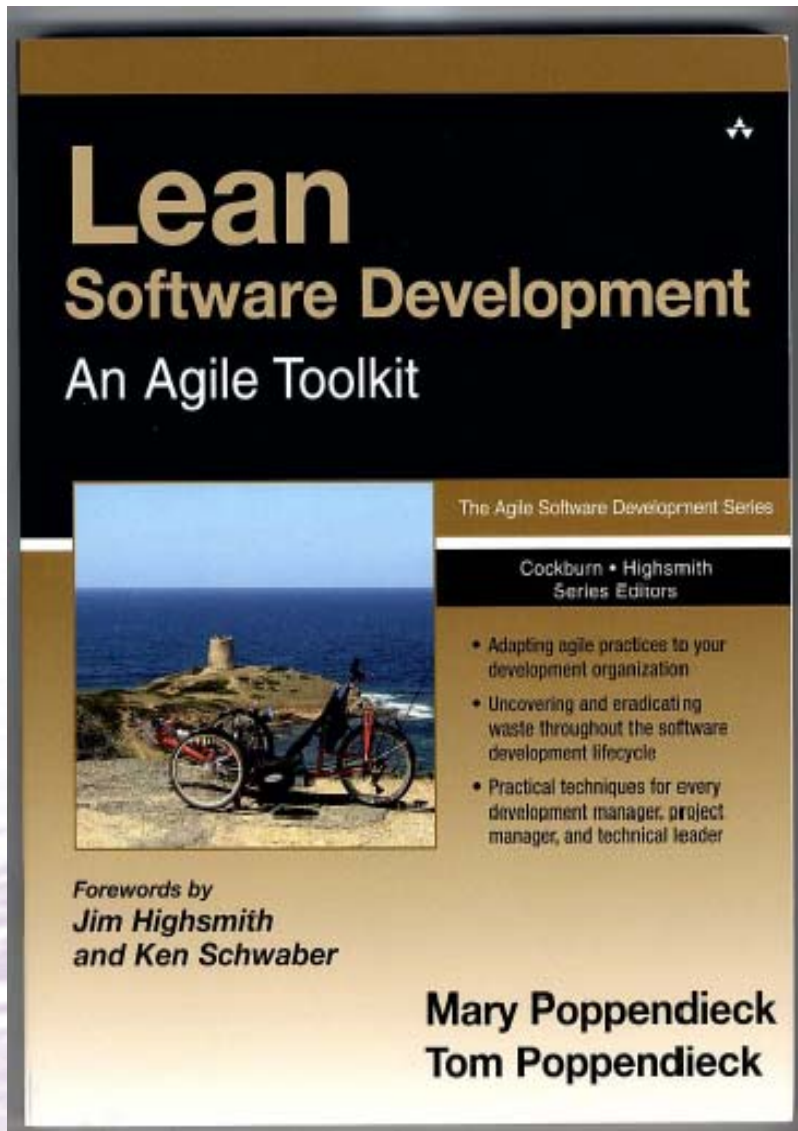
- Budget release (done; Eu 750K)
- CTM commitment

### • Next steps

- schedule/content agreement with OM, 15.Feb.
- R&D agile introduction workshops with BenQ confidential
- Gemstone / Ruby



# Books to read, esp. Ken Schwaber



# Besides Agile, we need a „real“ V-Model implementation

## • Goals

- Establish true V-Model for PLM, across whole organization, and for all parts, e.g. HW, SW, MD, ...)
  - Set up „complete“ horizontal layers of responsibility in the „V“
  - Define and agree on clear roles and responsibilities across all Org's
  - Establish measurable process discipline
  - Foster culture of internal customer satisfaction
- Improve TTM, Quality and cost position

## • Measures of Success

- Process maturity: > tbd
- QA deviations: < tbd
- Internal customer sat > 66%

## • Responsibilities

- Coach: Bocionek, else TBD

## • Reporting & Review

- Mgmt summary: monthly by SB & WK
- Ongoing KPI and „internal customer sat“ metrics

## • Project Schedule

- Find program mgr: SB, Feb 06
- **Alignment with QM/QP**, CM, TPM, SCM, SP, PD: SB, Feb 06
- Information Kick-off: SB Feb 06
- Start program: Feb. 06

### Project Status Summary:

#### • Achievements

- n/a

#### • Issues

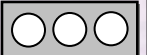
- Alignment with QM/QP not yet started

#### • support/decisions needed

- n/a

#### • Next steps

- n/a



# Project „Best in SW Tools for PHE“: J. Schmitz

- Goals
  - Introduce tool chain to support SW development process based on needs of SW organization and Agile SW development process for PHE
  - Perform Benchmarking
- Measures of Success
  - Rollout and training finished (date tbd mid Feb)
  - Infrastructure costs reduced by 20%
  - Positive user feedback >80%
- Responsibilities
  - Coach: Klebsch / Bocionek
  - Program Manager: Schmitz
  - Project Lead: Schmidt / Mechenbier
- Tools needed
  - Doors: Requ. Management (2)
  - Primavera: Proj. planning & controlling (3)
  - Continuous or Clearcase: Congig Mgmt (4)
  - ClearQuest: Defect tracking (1)
  - **Insource immediately**
- Reporting & Review
  - Weekly team meeting
  - Monthly steering board
- Project Schedule
  - Kick Off already done
  - First concept proposal available CW07
  - Steering board to decide on proposal CW08

## Project Status Summary: 20-Jan-06 :

### • achievements

- **Kick-off done; Benchmarking started**

### • issues

- **Ressource situation in ES dept. (only 1 person for CM leaving BenQ Mid of 02/06)**
- **Budget and timeline unclear today – depends on concept to be realized**

### • support/decisions needed

•

### • next steps

- **Concept proposal ready in cw07**





**Products**

# Project „Platform & Portfolio“: Bocionek/Eickholt

## • Goals

- Establish BenQ Mobile Portfolio, Roadmap and Platform collaboration
- **QA'ed documentation with approval and change request process of all stakeholders involved**
- Derive **concise strategies for re-use**, make-or buy decisions, partner selection and sales programs

## • Measures of Success

- Formal documentation and change mgmt in place: Feb 06
- „Re-use factor“ increased by 33% in year 1

## • Responsibilities

- Coach: Eickholt / Lepold
- Program Manager: Bocionek - tbd
- Roadmap def: Sydon ?

## • Reporting & Review

- Mgmt report in OPC council
- Quarterly presentation of updated roadmap and portfolio

## • Project Schedule

- Alignment with CM, PHE: Eickholt & Lepold, Jan 06
- 1st portfolio ready for approval: Sydon, Jan 06
- Updated roadmap: Feb. 06
- Re-use strategy doc: Feb 06

## Project Status Summary: 20-Jan-06 :

### • achievements

- good alignment meetings in Dec. 06; decision to treat platforms as own release streams

### • issues

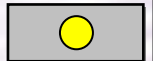
- little visible collaboration or activity
- no quantitative targets for platform utilization and re-use; no real platform definitions and application guidelines

### • support/decisions needed

- formal collaboration model needs to be established between CM and RD; in addition, aligned objectives need to be defined

### • next steps

- **first draft of QA'ed portfolio by U. Sydon due EO Jan. 06**



# Project „cleanApoxi“: Fässler

- Goals
  - Establish clear platform concept, including
    - Clean definition
    - Clean architecture
    - Clean release strategy
    - Clean toolkit usage concept
- Measures of Success
  - Definitions in place
  - Re-use of platform 7/07
  - APOXI cost below Native cost
- Responsibilities
  - Program mgr: Georg Fässler
- Reporting & Review
  - Reporting and review every 2nd month
- Project Schedule
  - Group members to be identified until end of January

## Add Project Status Summary:

- achievements
  - major goals identified
- issues
  - none
- support/decisions needed
  - none
- next steps
  - group members to be identified until end of January 2006



# Project „Thin Client Phone“: Bauregger

- Goals

- Build prototype and run feasibility study for a thin client phone
  - Thin form factor comparable to Nano iPod
  - WAP / Web browser
  - Telephone service exclusively via Skype
  - Office functions (email, other) via free web services (googlemail, etc)
- Experiment with service provider models
- Explore customers and partnerships (eBay, Google, etc)
- Drive requirements for cell phone middleware & engine ware layers

- Measures of Success

- Prototype works in 2Q06
- Costs < Euro 0'700

- Responsibilities

- Coach: Bocionek
- Project Manager: Bauregger

- Reporting & Review

- Standard project reviews

- Project Schedule

- Start in Feb. 06
- Details: tbd

## Add Project Status Summary:

- achievements
  - Kick off meeting planned cw04
  - Investigation of potential platform suppliers (HW/SW) startet
- issues
- support/decisions needed
- next steps
  - Define team setup cw04 (HW, SW, MD)
  - Start feature def. cw04



# Project „MD Q-Improvement“: Thonhauser, Bauregger

- Goals
  - Prevent defects and high return rates
  - Detect and correct potential problems as early as possible
  - Focus on PLM – SCM collaboration
    - Parts
    - Tools
    - Suppliers
- Measures of Success
  - **< 2% field return rate**
- Responsibilities
  - Coach: Bocionek
  - Program Manager: Bauregger/Thonhauser
- Reporting & Review
  - Monthly
- Project Schedule
  - Start: Feb 06

## Add Project Status Summary:

- achievements:
  - HW Kick off planned cw04
  - PLM MD Excellence Status: Root cause and levers documented and distributed 13.01.06
- issues
  - Management review for MD Excellence tbd. (Dr. Eickholt, Dr. Bocionek, Dr. Klebsch)
- support/decisions needed
- next steps
  - Define team set up cw04 (SP, SCM, RD)
  - HW Status update start cw05



**Ongoing  
Projects**

# Project „U2“: Rudolph, Fässler

- Goals

- Secure TTM of Polaris, Swift, Swan, Kestrel
- Scheduled overlap of teams
- Shifts between 7 and 11 (if needed)
- Weekend work (if needed)
- **Work packages as key metrics**
- Commitment driven
- Open status communication
- Fast reaction on issues
- No compromise on quality
- TEAMWORK

- Measures of Success

- TTM reached with less than 2 weeks deviation from plan

- Responsibilities

- Work packackage table: PD (Fässler, Rudolph)
- Wallcharts: TPM (Asmussen, Topel)
- Test Trends: PD (Wacker)
- **Project Managers U2: Polaris (Tim Hagemann), Swift (Markus Jaeger), Swan (Patric Houben), Kestrel (Stefan Liemen)**

- Reporting & Review

- Updated Charts: Monday (TPM)
- Wallchart review: 30min on Wedesdays
- First wallchart meetings: end Jan

Project Status Summary: 20-Jan-06 :

- achievements

- program setup within 5 weeks, incl. X-mas

- issues

- support/decisions needed

- next steps

- **wallchart reviews start 26-Jan-06**



# Project U2: Workpackages define Responsibilities

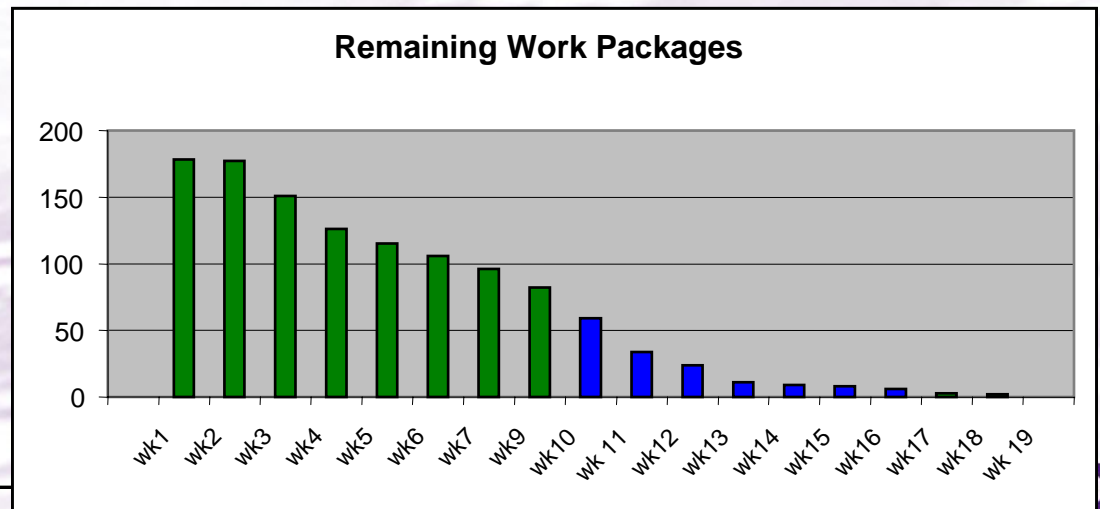
WEEK	Overdue		9		10	11	12	13	14	15	16	17	18	19	20	21	New Target Totals	Baseline 11/15
	Target	Actual	Target	Actual	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target		
Module 1			4	3	2	5	1										2	11
Module 2			10	13	4	3	2	1	1	1			2				8	49
Module 3			1	1	1	7	4	0	1			1	4	2			7	11
Module 4	2	2	10	7	6	2	1			1							17	64
Integration					2												2	3
Systemtest						1	2	3	1								3	12
Non-Functional	3	3	6		2	4	8	10			3						20	28
		5		21													59	178

TOTAL CLOSED  
WEEKENDING:  
01/103/03

26

1/03 - 10

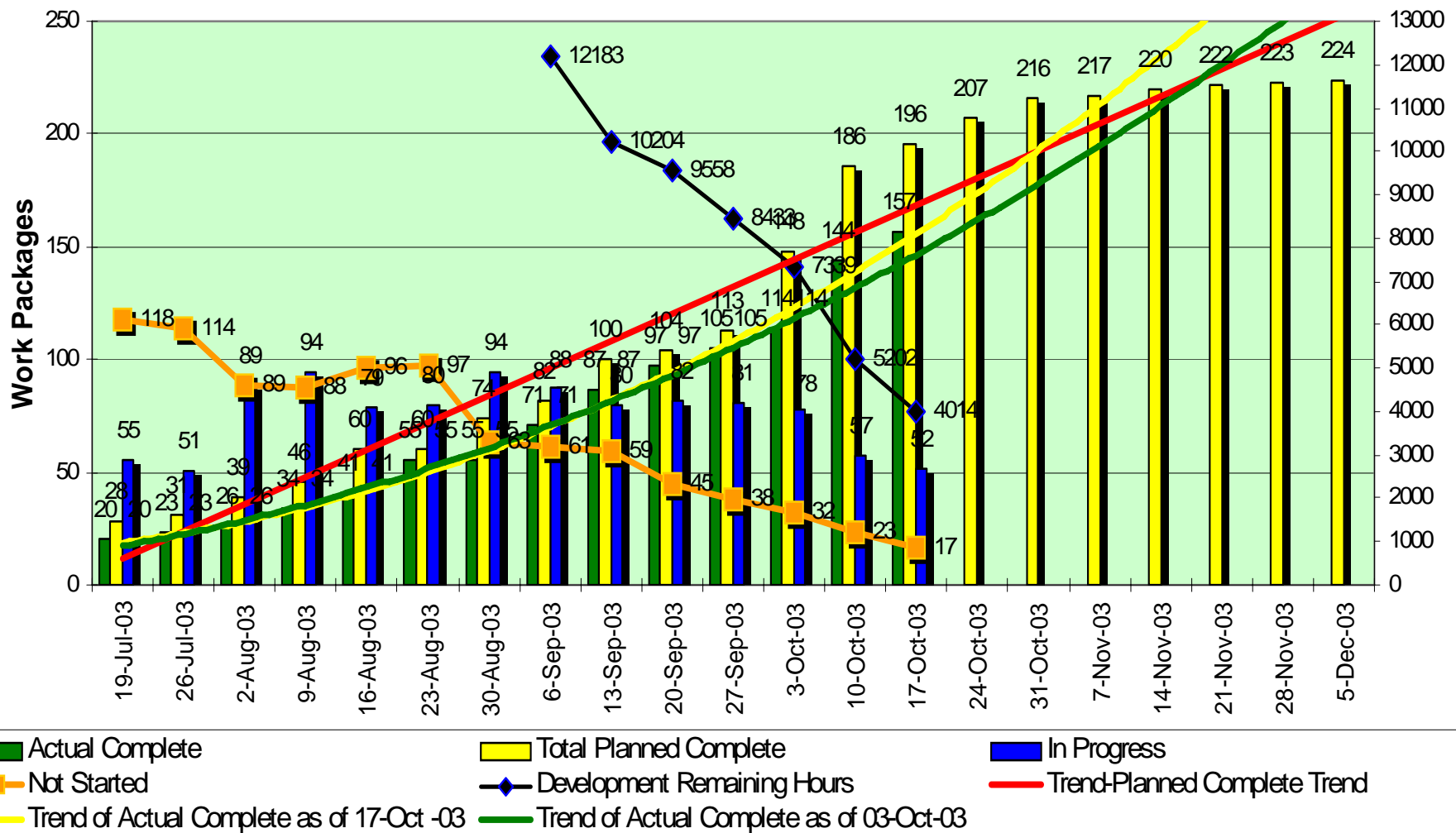
Target Totals:	wk10
Module 1	2
Module 2	8
Module 3	7
Module 4	17
Module 5	2
Integration	3
Non-Functional	20
<b>R&amp;D Total</b>	59



# Project U2: Wallchart Metrics allow for trending, e.g. of code freeze

## V2.1 Development Work Packages Status by Week

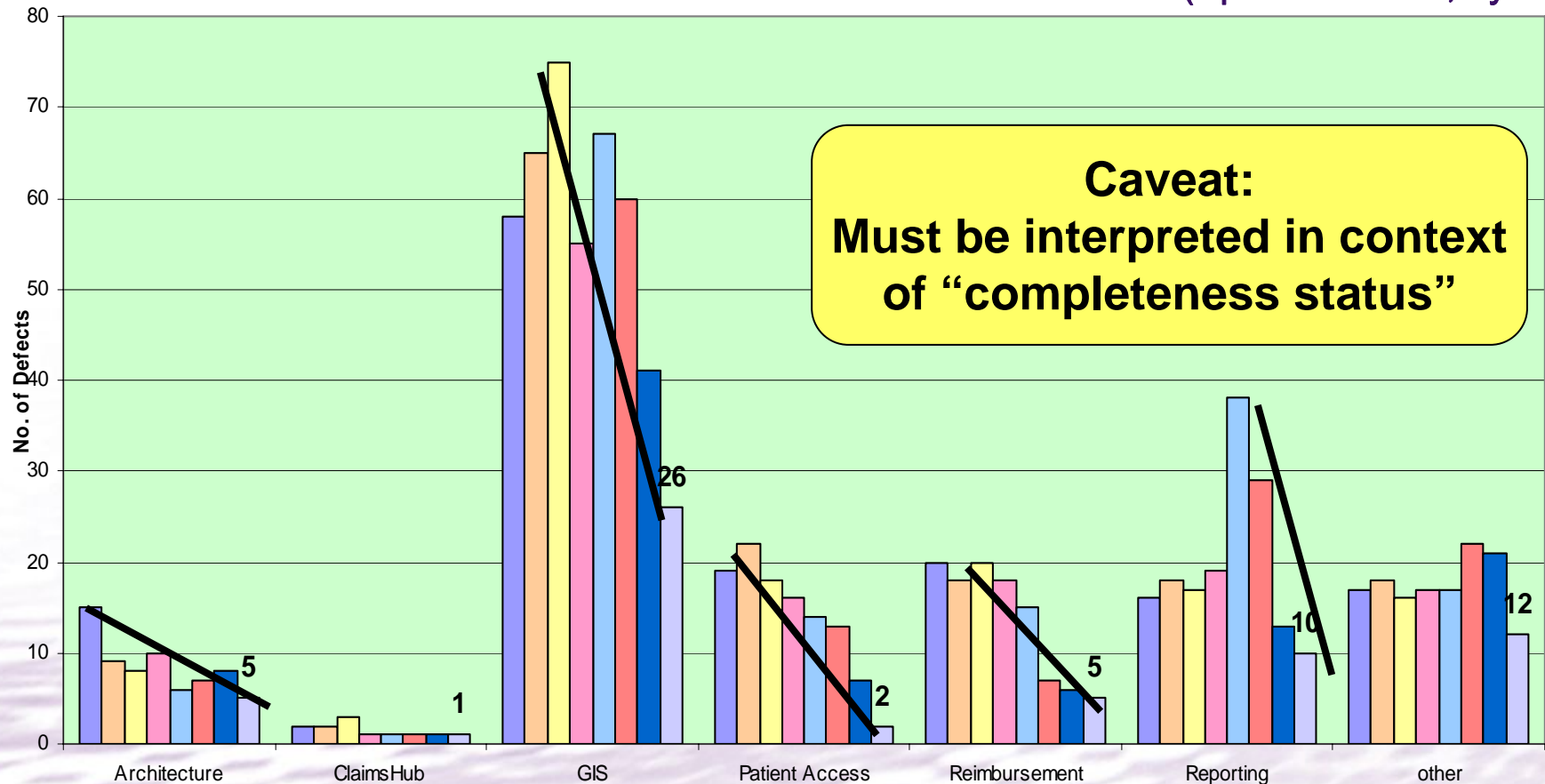
### Steering R&D on the 2<sup>nd</sup> Derivative of Shipping Date



# Project U2: Test Statistics allow for trending of M3

Trend lines count more than numbers!  
(Why? Speed is the first derivative of distance)

Drop 7 Open Defect Trend  
High, Medium & Low  
(April – June 03, by module)



■ April 21st ■ April 28th ■ May 5th ■ May 10th ■ May 16th ■ May 23rd ■ May 30th ■ June 6th

confidential

lek – Eickholt 2006/01/25 # 30

**BenQ**

# Requirements Volatility: The metric for CM/PM to work wisely with change requests

	Feature Requirements Raw Numbers						
	Baseline	Mod	DeScope	Add	%Mod	%Deleted	%Add
DSS	30	0	0	0	0.0%	0.0%	0.0%
HH	23	2	2	6	8.7%	8.7%	26.1%
MS4	21	0	1	5	0.0%	4.8%	23.8%
PA	22	0	0	0	0.0%	0.0%	0.0%
Plats	99	1	0	3	1.0%	0.0%	3.0%
Sig	2	0	0	1	0.0%	0.0%	50.0%
Soarian 2.1	294	0	66	47	0.0%	22.4%	16.0%
BusSeg	491	3	69	62	0.6%	14.1%	12.6%

Data calculated after a successful D4 (compares to M3)

# The Revolution: R&D Enjoys Metrics



## METRICS REVOLUTION