

Taking iProps to Level 4

Process Management in a Global Enterprise

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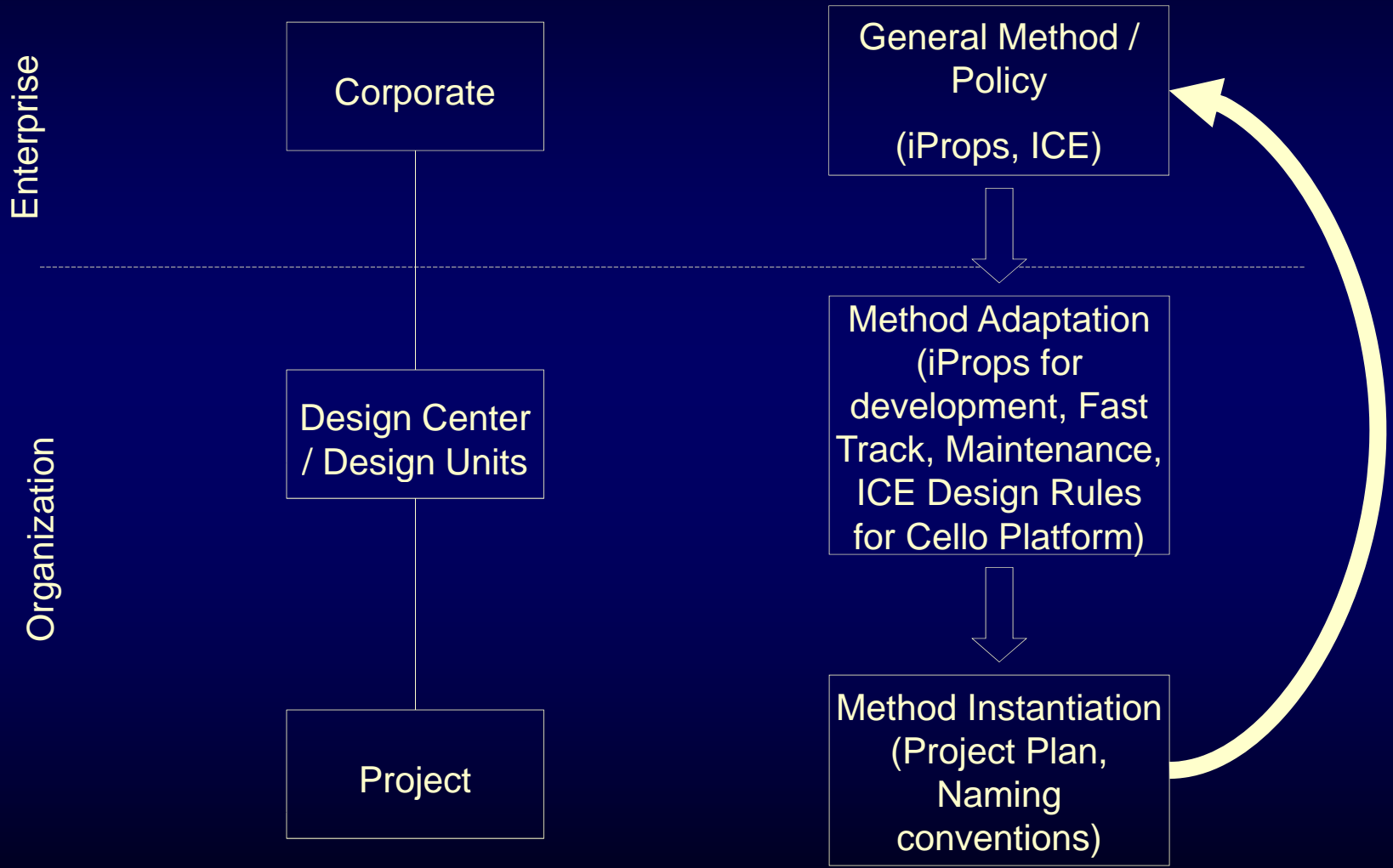
Is this what we want, what we need?



This is certainly a level 4 process, but is this what we are aiming for?

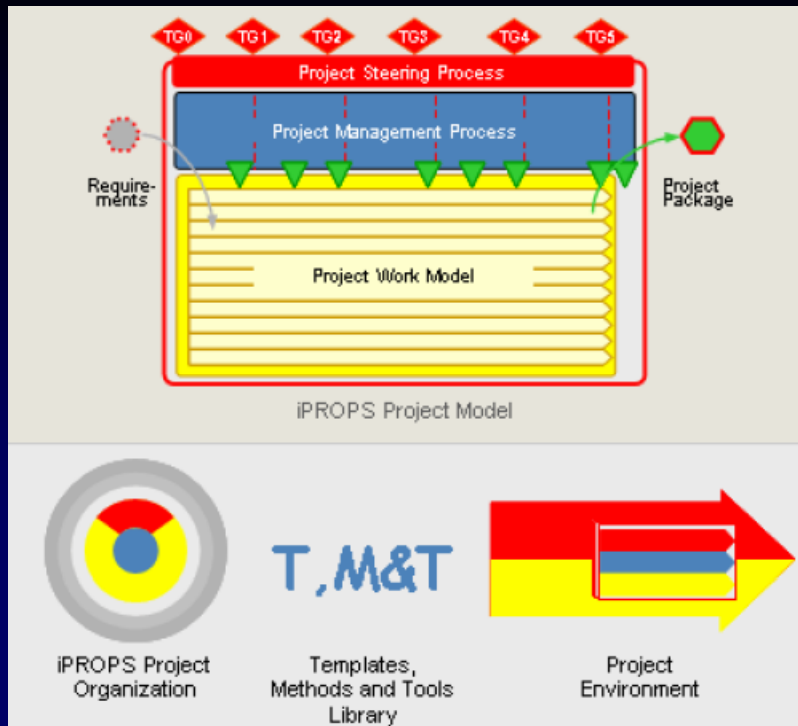
It is our contention that operating a global process at capability level 4 requires us to look at both, the enterprise and the organization levels since as we move from Level 1 (Performed) to Level 4 (Quantitatively Managed) process ownership moves from the local organization to corporate headquarters, and that any effective and efficient implementation requires of the knowledge and insight of the local organizations where the work is performed.

Relation Between Corporate, Design Centers and Projects with Regards to Processes

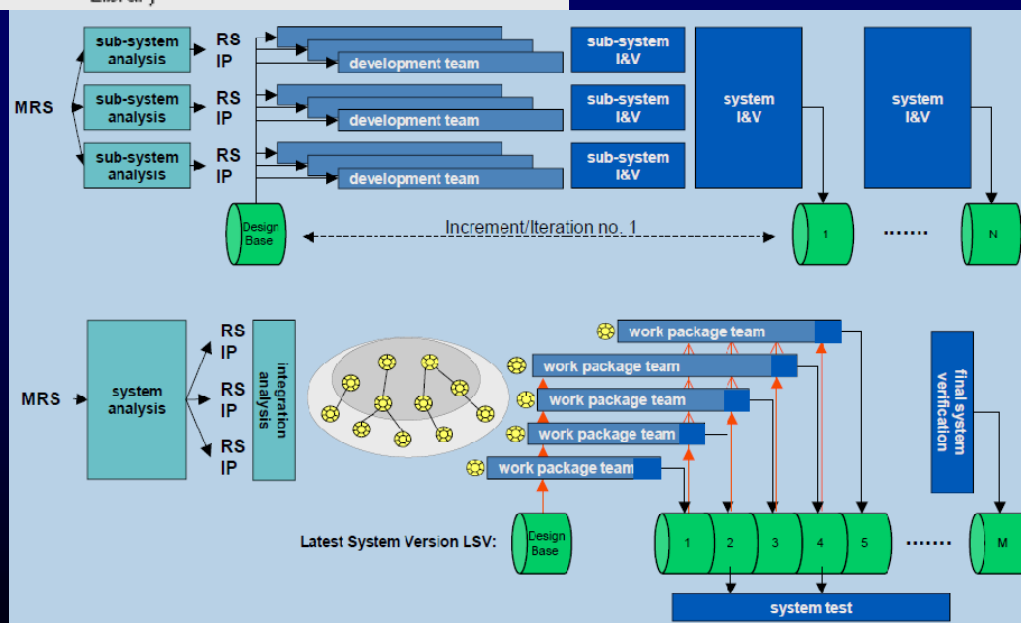


Agenda

- **The need for a global process**
- **Key Generic Goals at the Enterprise Level**
- **iProps and ICE**
- **Deploying at the Organization Level**
- **Conclusion**



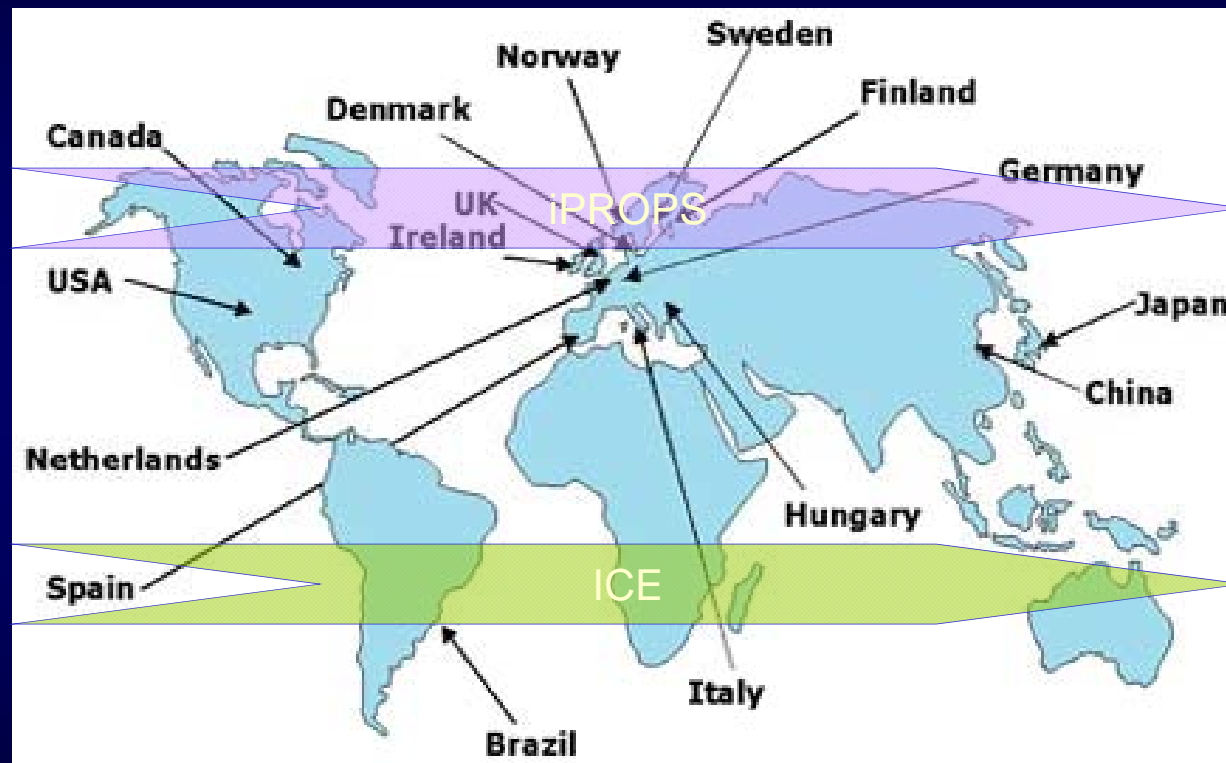
- **iPROPS.** Ericsson's global project management method for R&D projects



- **ICE.** Ericsson's global software development process

The Need for Global Processes

Support local R&D operations carried over in 16 countries



for a variety of product and platforms ranging from mobile phones to telecommunications platforms

So in the context of a global process when the CMMI says:

GP 3.2 Collect Improvement Information

Collect work products, measures, measurement results, and improvement information derived from planning and performing the process to support the future use and improvement of the organization's processes and process assets.

It is referring to a corporate responsibility and not a local one, and when it says:

SP 1.1-1 Determine Risk Sources and Categories

Determine risk sources and categories. [PA148.IG101.SP101]

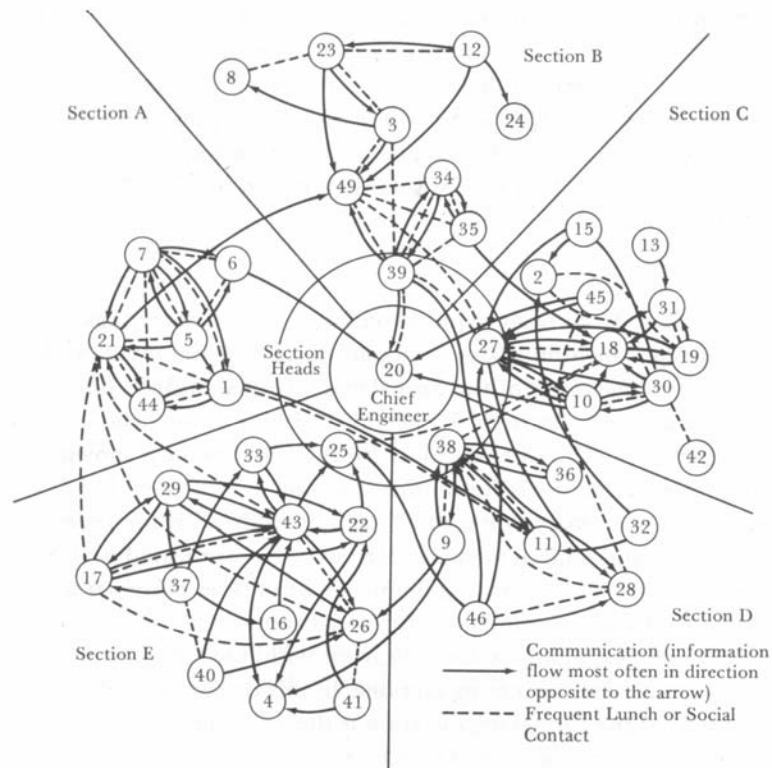
It is referring to things that are better managed at the local level

What do we mean by taking iProps to Level 4?

- **From an enterprise (global) perspective the key issues are:**
 - **Involving relevant stakeholders, two sides of the same coin**
 - Diffusion, the process whereby an innovation or change spreads or reach its potential adopters over time
 - Evolving the process as indicated by the measurements
 - **Measurement of the process performance across instantiations of the global process**
 - **Achieving a common understanding about the process behavior**
 - **Determining the right level of detail in a global process**
- **From an organization (local) perspective**
 - **Fill in the missing process elements**
 - **Deploy the global process**

Allen's Studies: Knowledge & Centrality Might Not Coincide

Figure 7.2 Communication Network in a Typical Department of Laboratory E, Showing the Influence of Formal and Informal Organization



- Who knows what?
- Where is the expert?
- Who influences results?
- Who are the gatekeepers?
- Who is helping whom?
- Who should we be asking?

Gatekeeper/Knowledge Broker Characteristics

- **High Technical Performance**
 - Not 'just communicators'
 - Highest technical performers in the organization
 - Cannot be created by management
- **Low in the Organizational Hierarchy**
 - Concentrated at first level of technical supervision or below
 - Seldom found at higher levels of management
 - Seldom found on the technical ladder
- **Visibility**
 - They are easy to identify
 - Everyone knows who they are
- **Approachable**

Assimilation Gap. Do not confuse acquiring the technology with its deployment

Figure 5 Cumulative Acquisitions and Deployments of RDBs

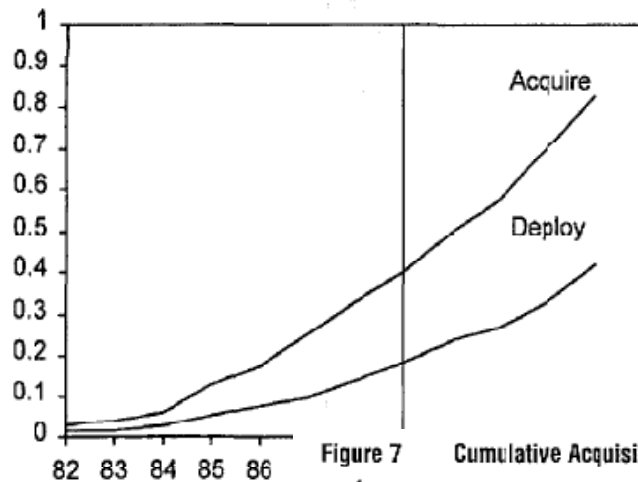


Figure 6 Cumulative Acquisitions and Deployments of 4GLs

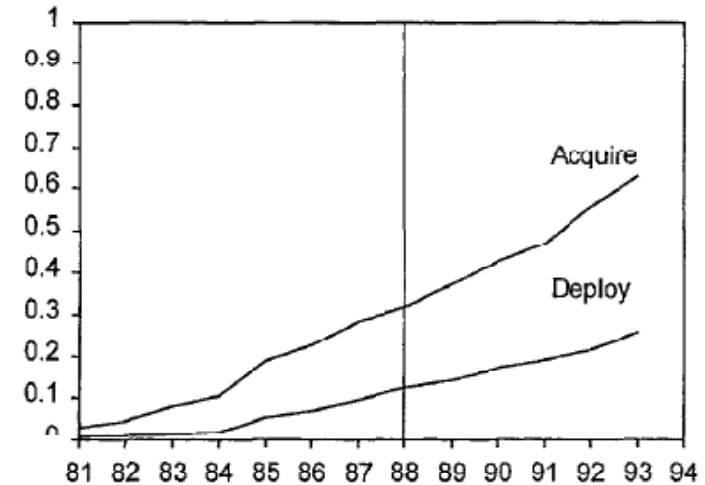
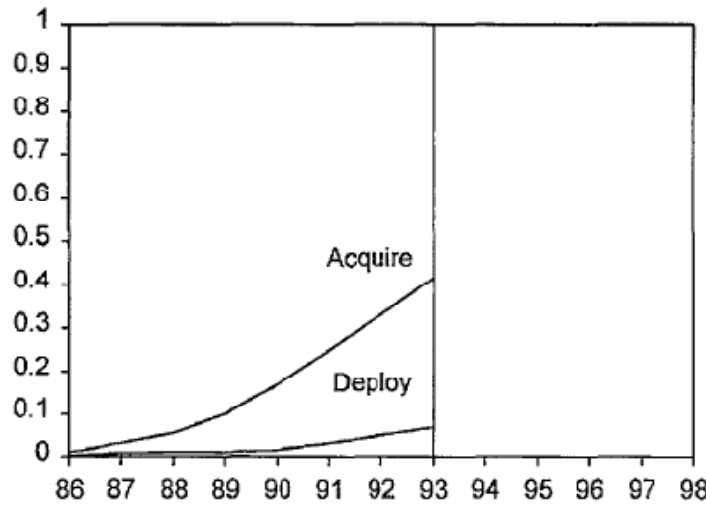


Figure 7 Cumulative Acquisitions and Deployments of CASE



The Illusory Diffusion of Innovation: An Examination of Assimilation Gaps, Fichman & Keremer, 1999

Adoption life cycles

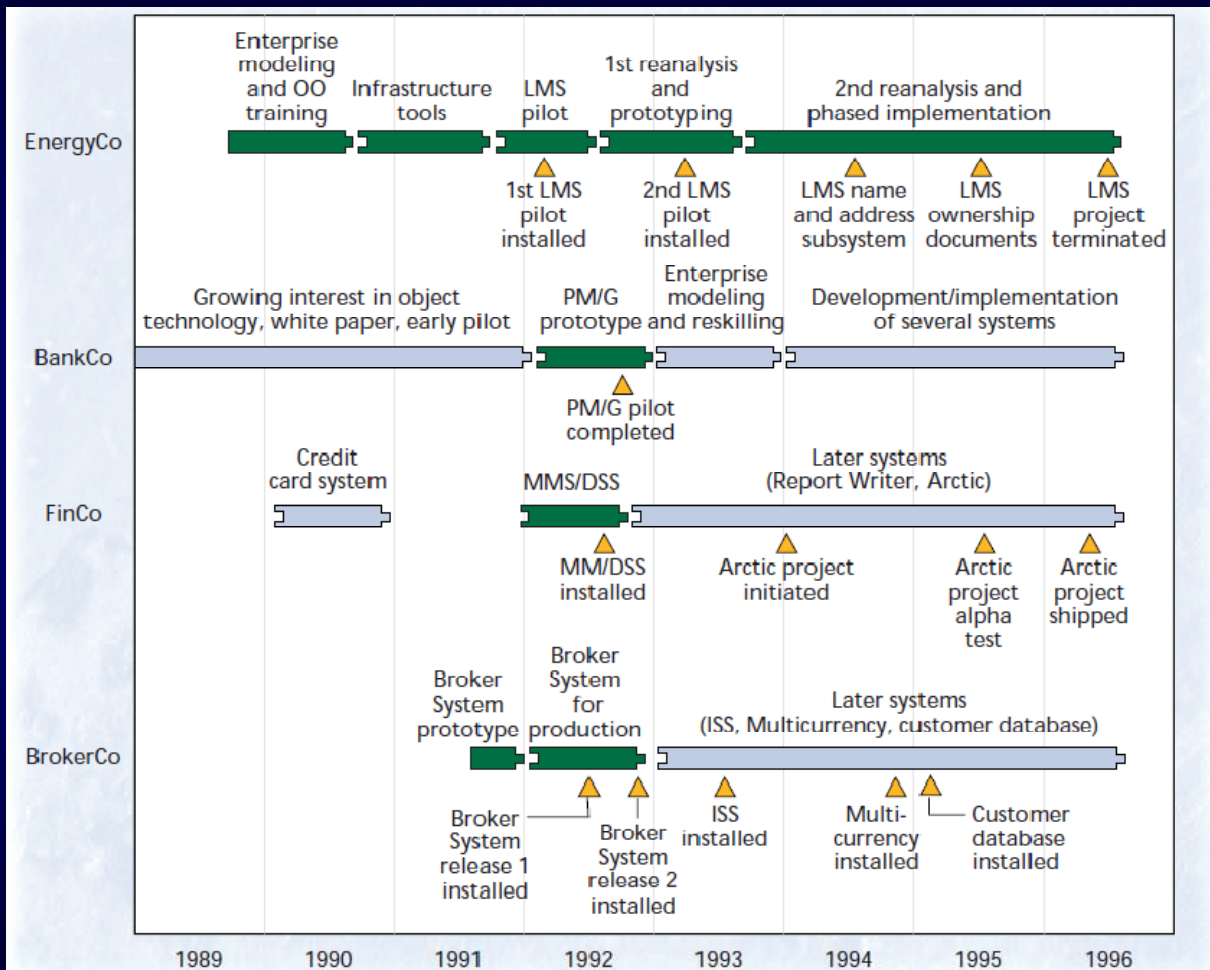


Figure 1. Timelines for OO activities in the four case studies, including activities related to focal projects in the adoption of OO (green lines) and activities related to OO but not to focal projects (blue lines). The triangles identify project milestones.

Fichman & Kemerer, IEEE Computer 1997

GP 2.7 Identify and Involve Relevant Stakeholders

- **Relevant stakeholders are identified among the suppliers of inputs to, the users of outputs from, and the performers of the activities within the process. Once the relevant stakeholders are identified, the appropriate level of their involvement in process activities is planned (GP124.SubP101.N101)**
 - **Who are the relevant stakeholders with reference to the iProps method?**
 - 45,000 employees
 - 1887 PM
 - 392 PMP
 - 300~600 lurkers
 - 100~150 contributors
 - **How do we involve them?**
 - **How do we minimize the possibility of missing valuable knowledge?**

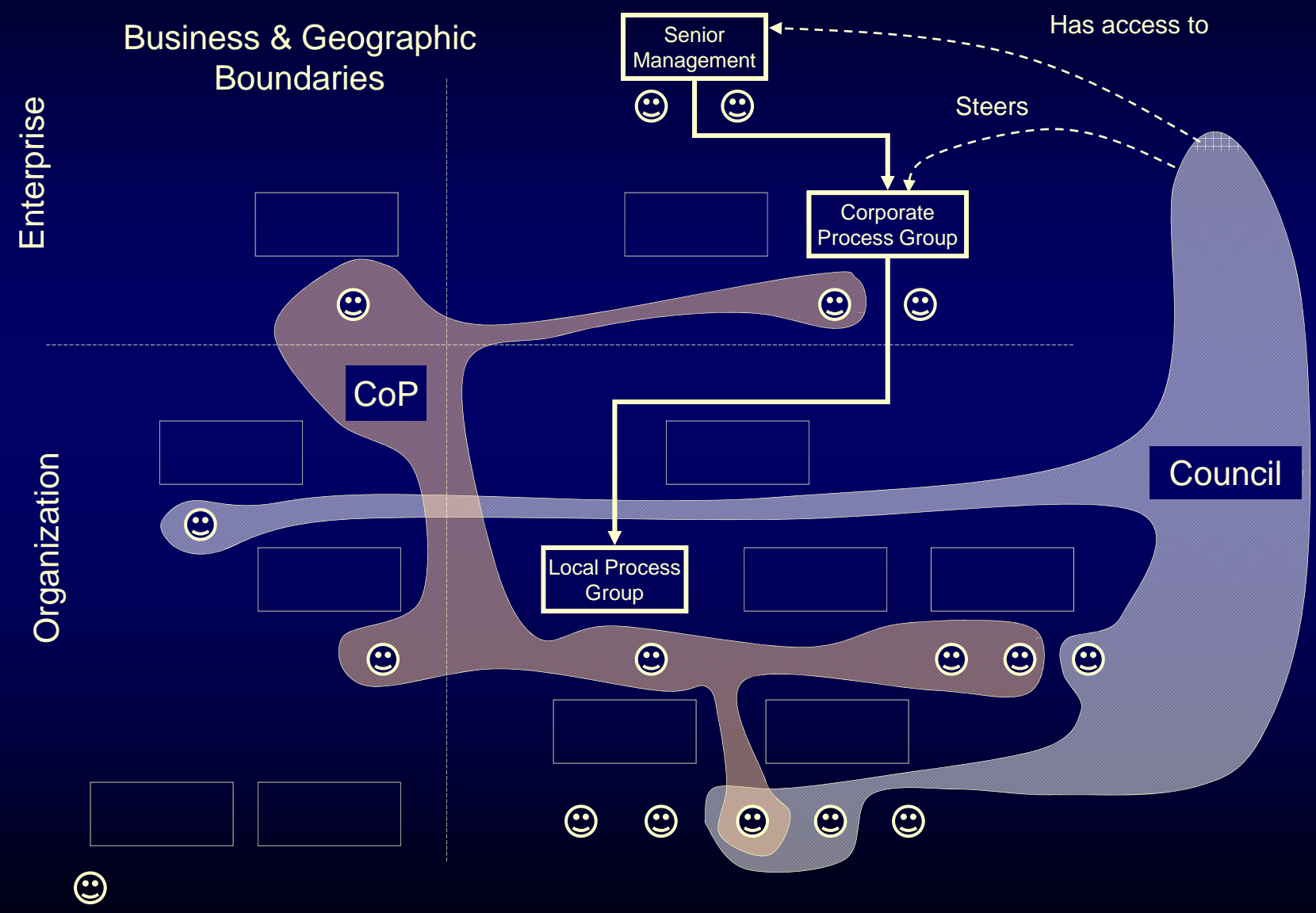
How do we involve them? Tapping into our intellectual capacity. A three tier system

- **Communities of Practice.** "Communities of Practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis"
- **Councils.** "Discipline councils are groups of people entrusted with a level of authority over the knowledge domain of a discipline and who steward its practice"
- **Process Group.** A collection of appointed specialists that facilitate the definition, maintenance, and improvement of the process(es) used by the organization.

Process Groups, Communities & Councils

	Objective	Activities	Extent	Recruitment & participation	What holds it together?
Process Group	Manage the process	<ul style="list-style-type: none"> •Process enactment •Facilitation •Infrastructure 	Scope of control within the line organization	Appointment	Mandate
Community of Practice	<ul style="list-style-type: none"> •Increase the skills in a given practice •Disseminate knowledge 	<ul style="list-style-type: none"> •Presentations by members and/or invitees •Problem discussions •Mail exchanges 	Transcend official organizational boundaries	Members who select themselves Join & drop at own discretion	Passion for the practice Trust and obligation
Council	Advise a political executive	<ul style="list-style-type: none"> •Council meetings •Review of initiatives •Statement of direction •Advise senior management 	Transcend official organizational boundaries Access to senior management designed into council's charter	By invitation, peer selection or recommendation Usually for a set term	Respect of a procedural authority

How do we propose they work together?



Ericsson Experience

In the past we enjoyed a number of real and virtual communities



ERICSSON PROJECT MANAGEMENT INSTITUTE

Home | Services & Tools | PROPS Model | PROPS VPR | Project Networking | Conferences

This site is your one stop for all project-management issues in Ericsson.

The project-management portal: worth a visit

You have lots to gain from checking out the prime PM portal in Ericsson. Where to find it? Why, you're already there! Kenneth Malmqvist and Cristina van Leeuwen are two recurrent visitors.

Kenneth - PROPS is a guiding star. Cristina - I come back frequently to follow current PM discussions.

Project Office Manager Network

Main page

- Project Office Manager Network
- Main page
- Objectives and strategies
- Membership
- Mail to members
- Links to Project Offices
- Seminar reports
- Literature list

Objectives

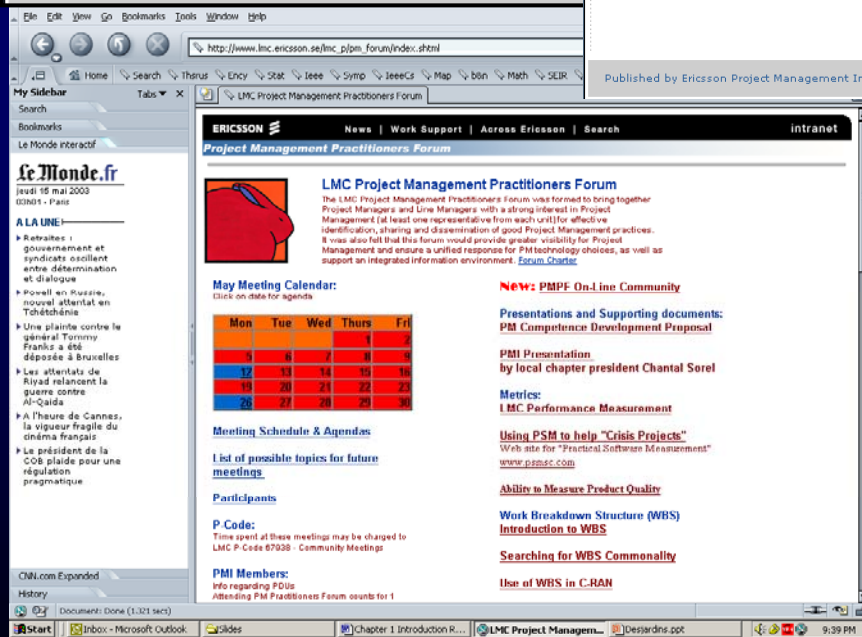
- improve project handling
- identify opportunities for common strategies
- identify an Ericsson view on key Project Management issues
- determine how to cooperate for the future

Purpose

Support Project Offices in their ambitions to:

- improve project management and management of projects
- focus on management of projects
- improve the role of project managers
- identify synergies

Read more

ERICSSON PROJECT MANAGEMENT INSTITUTE

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Project Management Practitioners Forum

LMC Project Management Practitioners Forum

The LMC Project Management Practitioners Forum was formed to bring together Project Managers and Line Managers with a strong interest in Project Management (at least one representative from each unit) for effective identification, sharing and dissemination of good Project Management practices. It was also felt that this forum would provide greater visibility for Project Management and ensure a unified response for PM technology choices, as well as support an integrated information environment. [Forum Charter](#)

May Meeting Calendar:
Click on date for agenda

Mon	Tue	Wed	Thurs	Fri
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

Mentoring Schedule & Agendas

List of possible topics for future meetings

Participants

P Code:
Time spent at these meetings may be charged to LMC P Code 67020 - Community Meetings

PMI Members:
Info regarding PDUs
Attending PMI Practitioners Forum counts for 1

News: PMPE On-Line Community

Presentations and Supporting documents:
PM Competence Development Proposal

PMI Presentation by local chapter president Chantal Sorel

Metrics:
LMC Performance Measurement

Using PSM to help "Crisis Projects"
Web site for "Practical Software Management"
www.psmc.com

Ability to Measure Product Quality

Work Breakdown Structure (WBS) Introduction to WBS

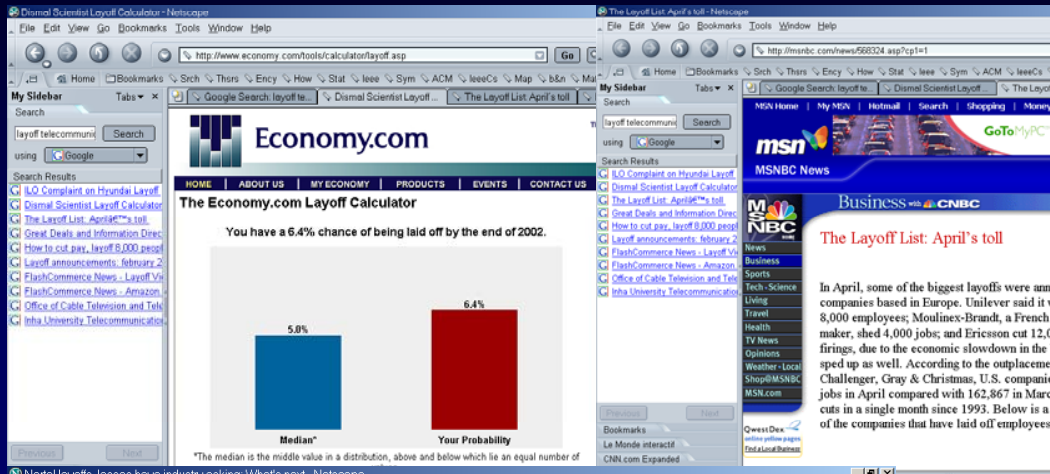
Searching for WBS Commonality

Use of WBS in C-RAN

The PROPS Consultant Network 117 PROPS Consultants - 25 Countries



... then the crisis came ...



Economy.com
The Economy.com Layoff Calculator


You have a 6.4% chance of being laid off by the end of 2002.

5.8%	6.4%
Median*	Your Probability

*The median is the middle value in a distribution, above and below which lie an equal number of

Aglient: The Bad Times

- The slowdown of the economy hurt sales
- In 2001 the HP driven "Computer Revolution" failed
- The fall of telecommunication companies.




NetworkWorldFusion
The leader in network knowledge.

Nortel layoffs, losses have industry asking: What's next?

By *Jim Duffy, Tim Greene and Phil Hochmuth*
Network World, 10/06/01

MISSISSAUGA, ONTARIO - When Nortel is finished with its latest round of layoffs, divestitures, facility closings and management shakeups, the vendor will hardly resemble the company that it once was.

Nortel, which last week announced plans to fire up to 20,000 more people, shutter more "noncore" operations and replace its CEO with its CFO, is streamlining its business again after warning of another multibillion-dollar quarterly loss. It will now focus on three areas - long-haul optical, metropolitan and wireless networks - instead of the five it targeted just three months ago. Two IP-related areas having been



TELEPHONY ONLINE
A PRIMEDIA PUBLICATION

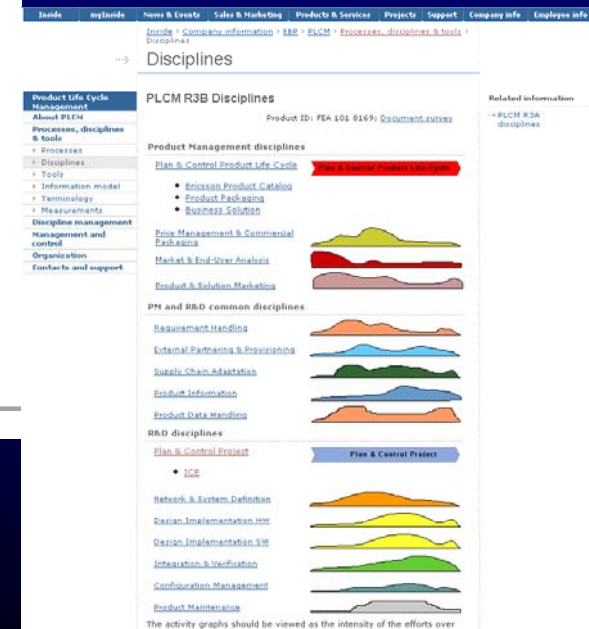
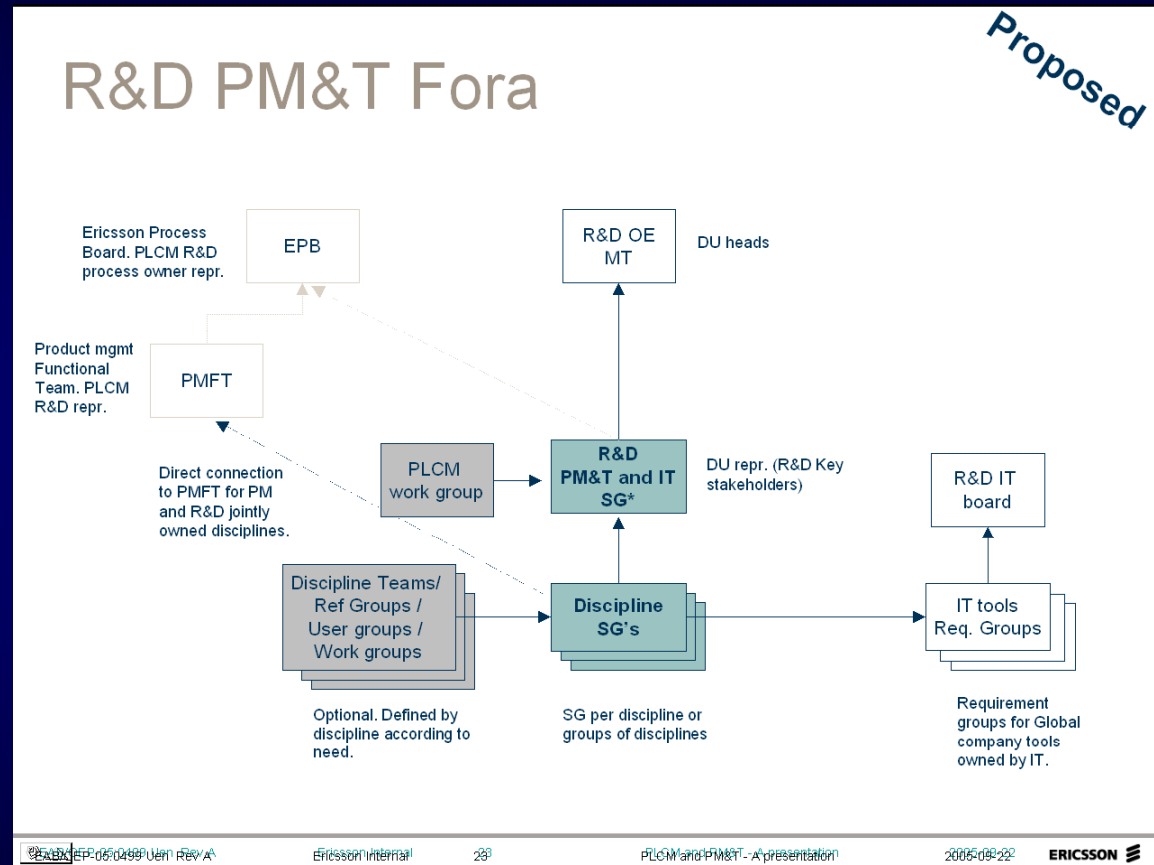
Ericsson announces layoffs, disappointing Q1

Telephony, Apr 23, 2001

Ericsson late last week announced a 90% decrease in profits for the first quarter. The Sweden-based mobile phone company also said it would lay off as many as 12,000 additional workers - 2000 from its handset division - to bring its job-cut total for the year to as much as 20,000.

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... and we moved towards more centralized approaches



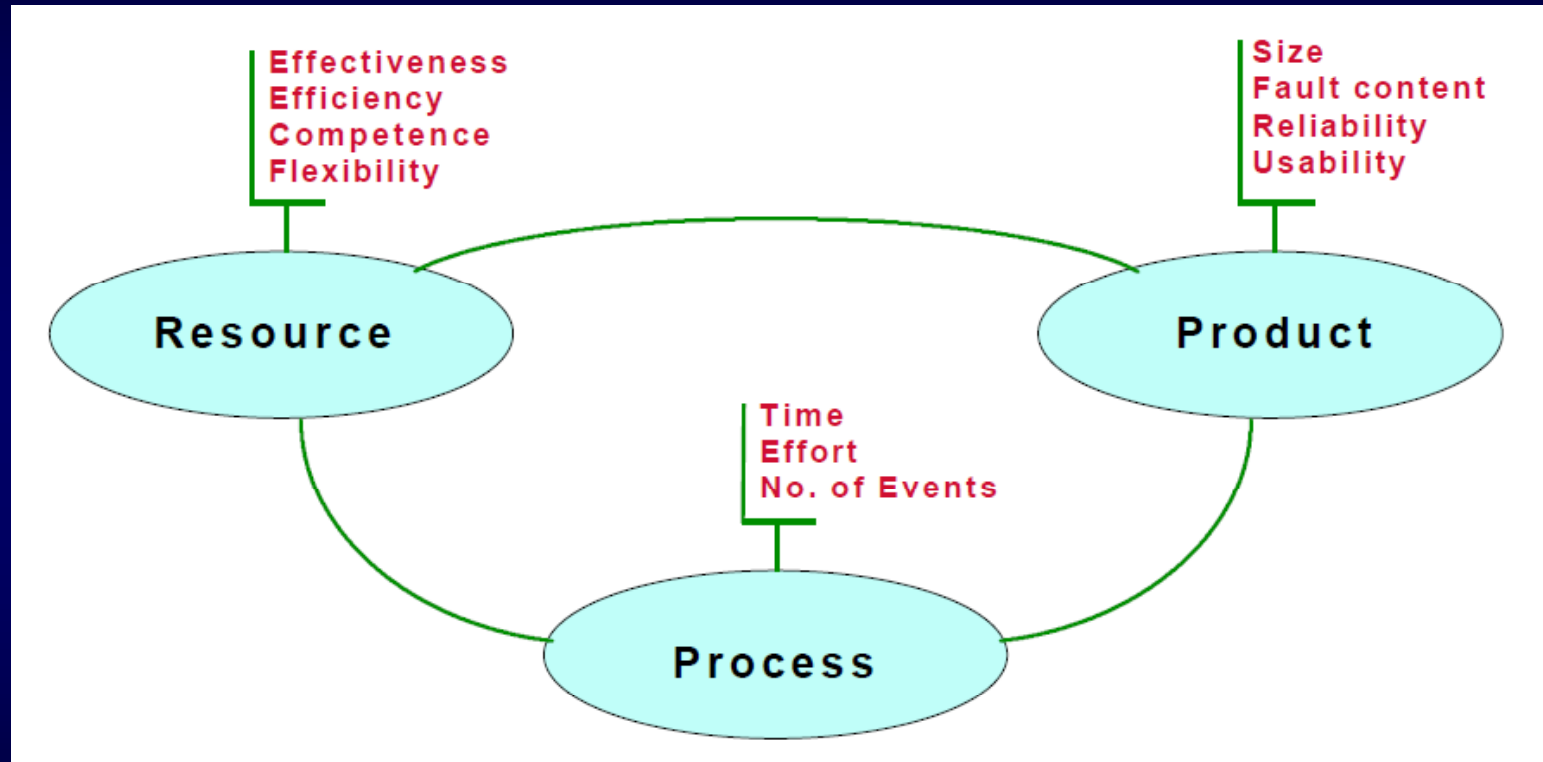
What have we learned in the process?

- **Develop effective community leadership & support**
 - **Sponsor**
 - **Community leader(s)**
 - **Core member**
 - **Expert**
 - **Knowledge manager/librarian**
- **Maintain domain focus, create interesting and relevant dialogue**
- **Make it easy to participate and contribute, allow time to participate**
- **Involve thought leaders and experienced practitioners**
- **Build member relationships through trust and obligation**
- **Keep active core group**

GP 3.2 Collect Improvement Information

- **Collect work products, measures, measurement results, and improvement information derived from planning and performing the process to support the future use and improvement of the organization's processes and process assets.**
 - **What needs to be measured?**
 - **What is relevant information?**
 - **How do we achieve commonality?**
 - **How do we make it available?**
 - **How do we make it available?**

What needs to be measured?



What is relevant information?

Strategic Level. The evolution of the process capabilities is monitored and benchmarked to assess the competitiveness of the organization and set policies. Benchmarking, Data Envelopment Analysis

Process Management Level. Data is grouped across the organization. Process capabilities are established and monitoring using control charts.

Project Management Level. Data is grouped and presented in context. Forecasts are made using models. i.e Error Projection Model. Planning constants.

Transactions & Artifact Level. Provides the base measurements, i.e: How big is Block X, How many TRs were closed last week

Measures used to characterize process performance should (CMU/SEI-97-HB-003)

- **Relate closely to the issue under study. These are usually issues of quality, resource consumption, or elapsed time.**
- **Have high information content. Pick measures of product or process qualities that are sensitive to as many facets of process results as possible.**
- **Pass a reality test. Does the measure really reflect the degree to which the process achieves results that are important?**
- **Permit easy and economical collection of data.**
- **Permit consistently collected, well-defined data.**
- **Show measurable variation. A number that doesn't change doesn't provide any information about the process.**
- **As a set, have diagnostic value. They should be able to help you identify not only that something unusual has happened, but what might be causing it.**

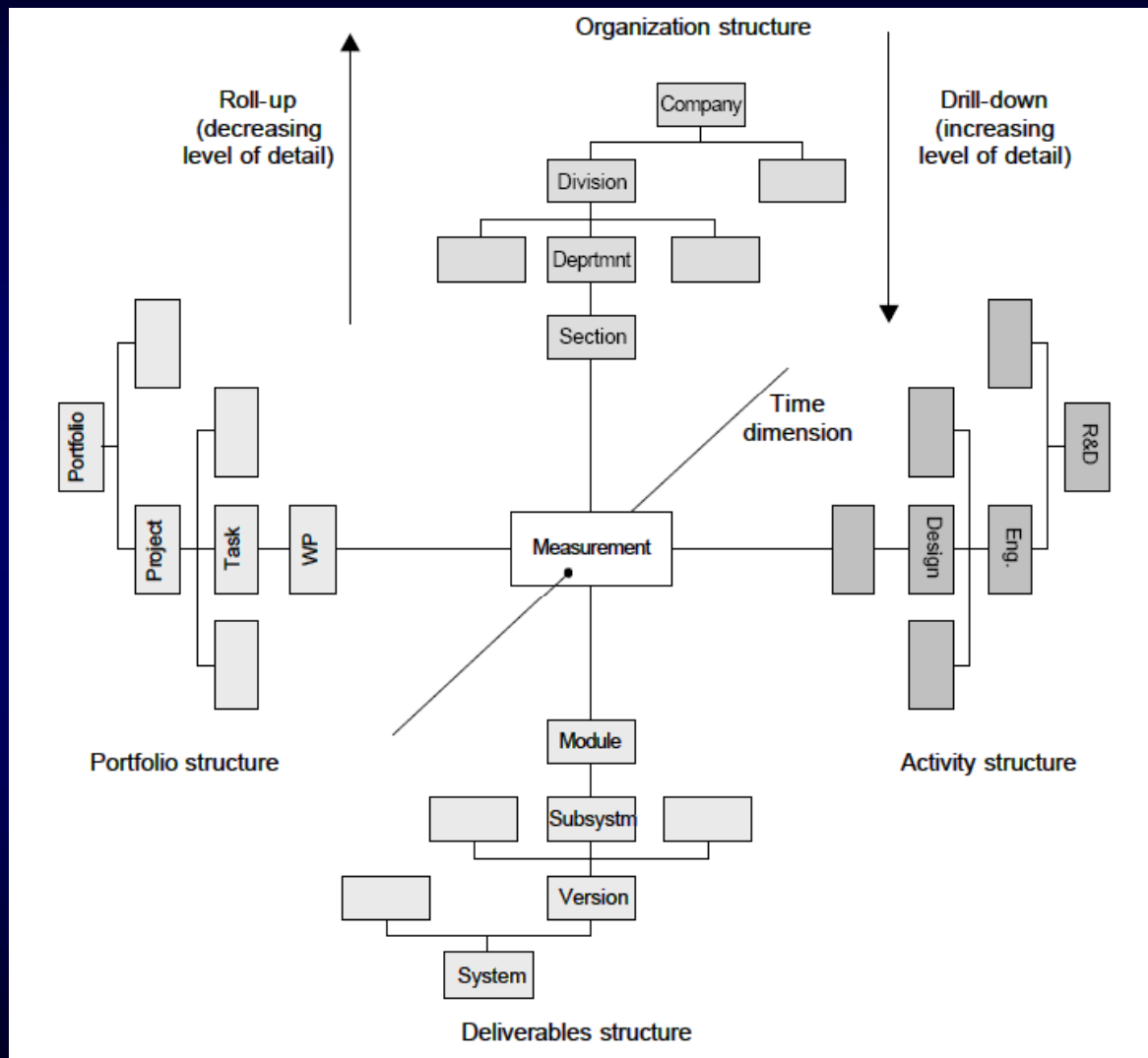
How do we achieve commonality? (CMU/SEI-97-HB-003)

- **Criteria to be applied**
 - **Communication.** If someone uses the definition as a basis for measuring or describing a measurement result, will others know precisely what has been measured, how it was measured, and what has been included and excluded?
 - **Repeatability.** Could others, armed with the definition, repeat the measurements and get essentially the same results?
- **Enablers**
 - **Extensible classification schema**
 - **Common repository**

Extensible Classification Schema. Borrowing some ideas from Orthogonal Defect Classification

- *ODC* essentially means that we categorize a defect (*measurement*) into classes that collectively point to the part of the process that needs attention, much like characterizing a point in a Cartesian system of orthogonal axes by its (x, y, z) coordinates. In the software development process, although activities are broadly divided into design, code, and test, each organization can have its variations.
- We need to allow room for differences among organizations and for the evolution of process, products and organizations
- The Software Process Engineering Meta-model Specification by OMG provides some good ideas


Extensible Classification Schema



- Top level defined at enterprise level
- Lower levels defined by Design Centers according to their needs
- Rules governing the creation of aggregation structures

Ericsson Experience

We had common definitions ...

ERICSSON  News | Work Support | Across Ericsson | Search intranet

fast [About fast](#) [Crash Commission](#) [Measurements Commission](#) [Key Project Assessments](#) [Best Practices](#)

Up a level

- Home
- Objectives
- Core Team
- Measurements
- Specifications
- Performance Management
- Measurement Measurements
- Structure
- Measurement Systems
- Configuration
- Measurement Training

ERICSSON PROVISIONING MEASUREMENT FRAMEWORK


Ericsson Provisioning Measurement Group

Framework Overview	PDF Word
Motives	PDF Word
Infrastructure	PDF Word
Concepts	PDF Word
MRD	Instruction HTML
	Template PDF Word SGML
	Example Ex1.pdf Ex2.pdf Ex3.pdf
MDD	Instruction HTML
	Template PDF Word SGML
	Example Ex1.pdf Ex2.pdf Ex3.pdf
Process	Description PDF Word
	Map PDF PPT
Core Attributes/ Core measures	Efficiency

Motives →

Overview

- Measurement Process → Core measures
- Measurement Data and Result Definitions: instructions, templates and examples
- Measurement concepts and terms
- Measurement infrastructure

ERICSSON  Document - Document **MEASUREMENT RESULT DEFINITION** Slide / Page 2 (4)

Version: 1.0
EED/U/P Rasmus Nurminen
Draft - Approved
MCT MCTR/CG

Host - Checked
MCT

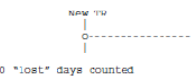
Document in Use/Document No.
EED/U/OP-00:018

Date - Date
2001-01-10

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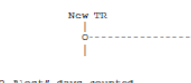
Ref - Reference

Example 1: TR is answered within the goal. The amount of "lost" days is 0 regardless of how much before the goal the TR is answered.



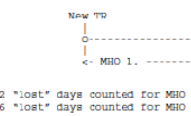
0 "lost" days counted

Example 2: TR is answered after the goal date. The amount of "lost" days is the number of days spent after the goal.



2 "lost" days counted

Example 3: TR is answered after the goal date. The responsible MHO is changed between first registration to design and Technical Answer. The amount of "lost" days is the number of days spent after the goal within each MHO.



2 "lost" days counted for MHO 1.
6 "lost" days counted for MHO 2.

Presentation of Measurement Result:

The results of the measurement are to be shown as a graph and a table. The following formula is to be used to calculate the result. For a calculation, the TRs taken into account depend on whether the result is for A priority, B priority, C priority, or Overall.

Graph: Bar Chart of average days lost per TR by time increment. The horizontal axis represents a calendar interval made up of time increments. The user selects the size of the time increments and the date range of the calendar interval. The typical display is monthly increments over a period of one year, although weekly, quarterly, and yearly, are also selectable increments. The vertical axis represents the average days lost per TR during each time increment. Each time increment is divided into the four subcategories A priority, B priority, C priority, and Overall.

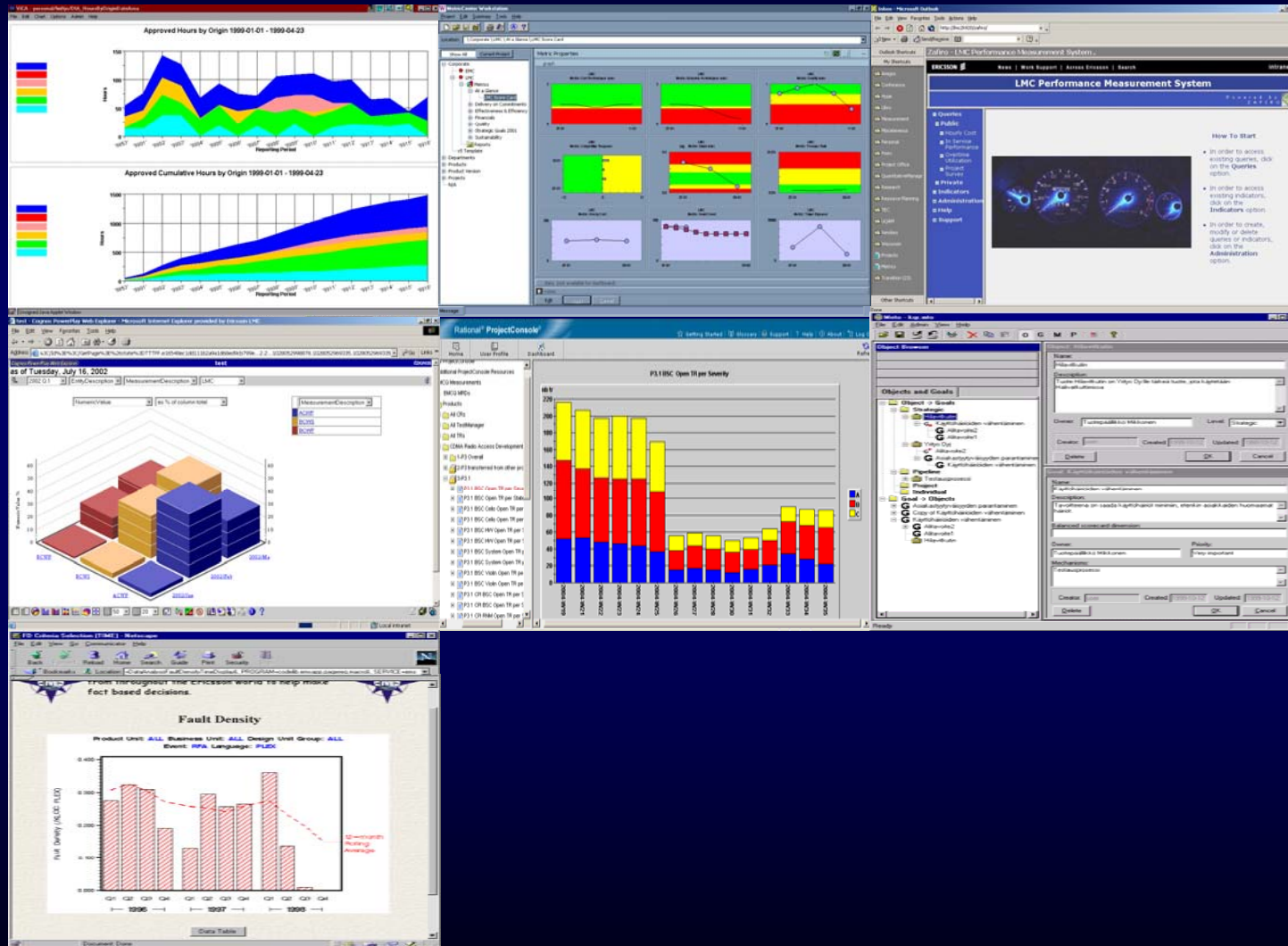
Overlying the bar chart are four lines showing the rolling average of these counts. The lines represent the rolling average result for A priority, B priority, C priority, and Overall. The user selects the length of the averaging window. The default length is six months.

Publisher: Seamus Glynn Editor: Vince Boyle Updated: 28

- **Measurement Data Definition.** The purpose of the MDD is to provide a consistent way to describe base and derived measurements and to provide a description of essential details such as purpose, application, definition, collection and, validation.

- **Measurement Result Definition.** The purpose of the MRD is to define indicators. The MRD provides a standardized description of essential details, such as purpose of the indicator, definition and interpretation of results, measurement customer, scope, and so on.

... we experimented with a number of repositories ...



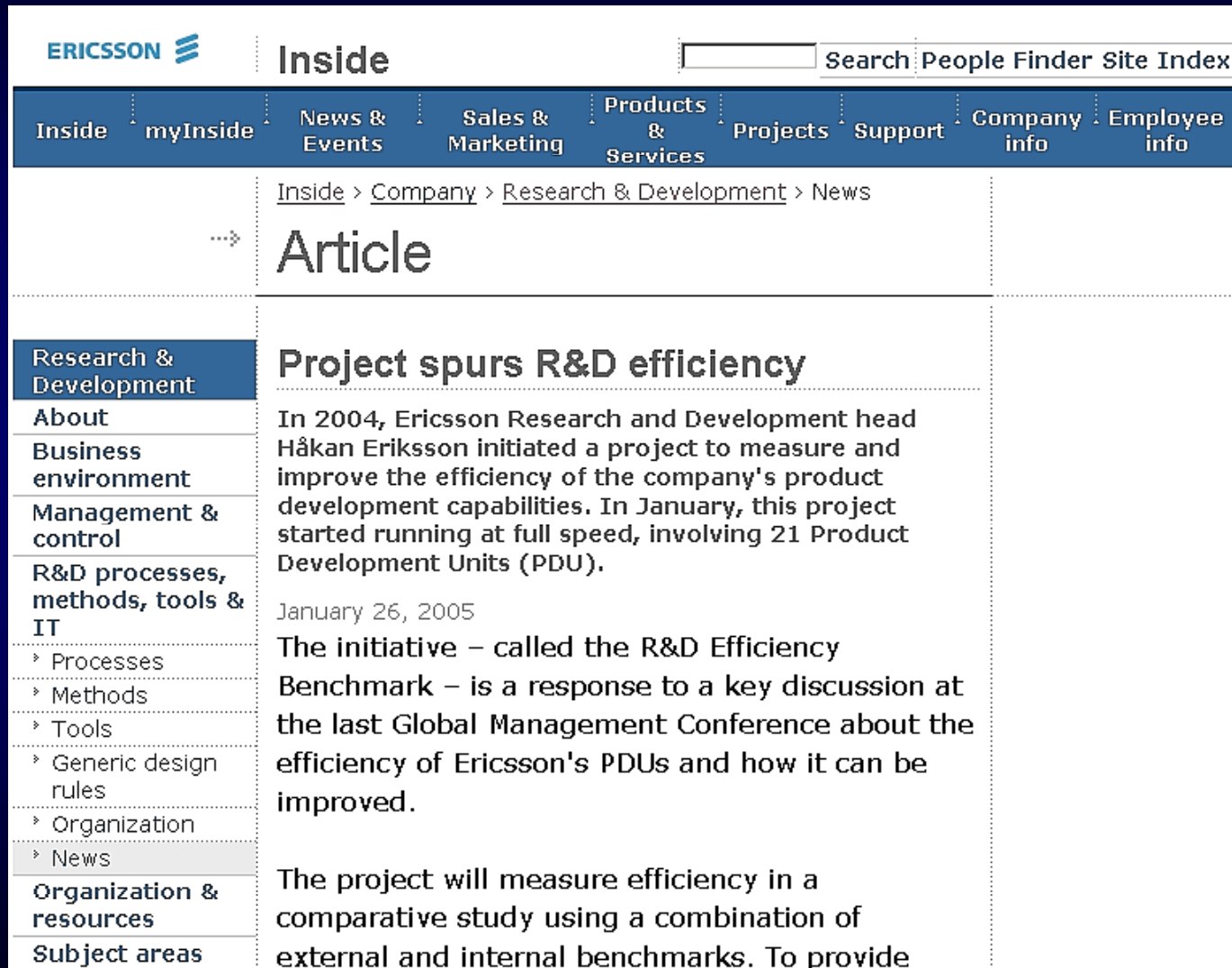
... then the crisis came ...

Aglient: The Bad Times


- The slowdown of the economy hurt sales
- In 2001 the HP driven "Computer Revolution" failed
- The fall of telecommunication companies.



... but now we are coming back.



The screenshot shows the Ericsson website's 'Inside' section. At the top, there is a navigation bar with the Ericsson logo, the word 'Inside', a search box, and links for 'People Finder' and 'Site Index'. Below this is a secondary navigation bar with links for 'Inside', 'myInside', 'News & Events', 'Sales & Marketing', 'Products & Services', 'Projects', 'Support', 'Company info', and 'Employee info'. The main content area shows a breadcrumb trail: 'Inside > Company > Research & Development > News'. The article title is 'Article' with a right-pointing arrow. The article content includes a sub-header 'Project spurs R&D efficiency', a paragraph describing the project initiated by Håkan Eriksson in 2004, the date 'January 26, 2005', and a detailed description of the 'R&D Efficiency Benchmark' initiative. A sidebar on the left lists various categories under 'Research & Development', with 'News' highlighted.

ERICSSON  **Inside** Search [People Finder](#) [Site Index](#)

[Inside](#) [myInside](#) [News & Events](#) [Sales & Marketing](#) [Products & Services](#) [Projects](#) [Support](#) [Company info](#) [Employee info](#)

[Inside](#) > [Company](#) > [Research & Development](#) > News

→ **Article**

Research & Development

Project spurs R&D efficiency

In 2004, Ericsson Research and Development head Håkan Eriksson initiated a project to measure and improve the efficiency of the company's product development capabilities. In January, this project started running at full speed, involving 21 Product Development Units (PDU).

January 26, 2005

The initiative – called the R&D Efficiency Benchmark – is a response to a key discussion at the last Global Management Conference about the efficiency of Ericsson's PDUs and how it can be improved.

The project will measure efficiency in a comparative study using a combination of external and internal benchmarks. To provide

About

Business environment

Management & control

R&D processes, methods, tools & IT

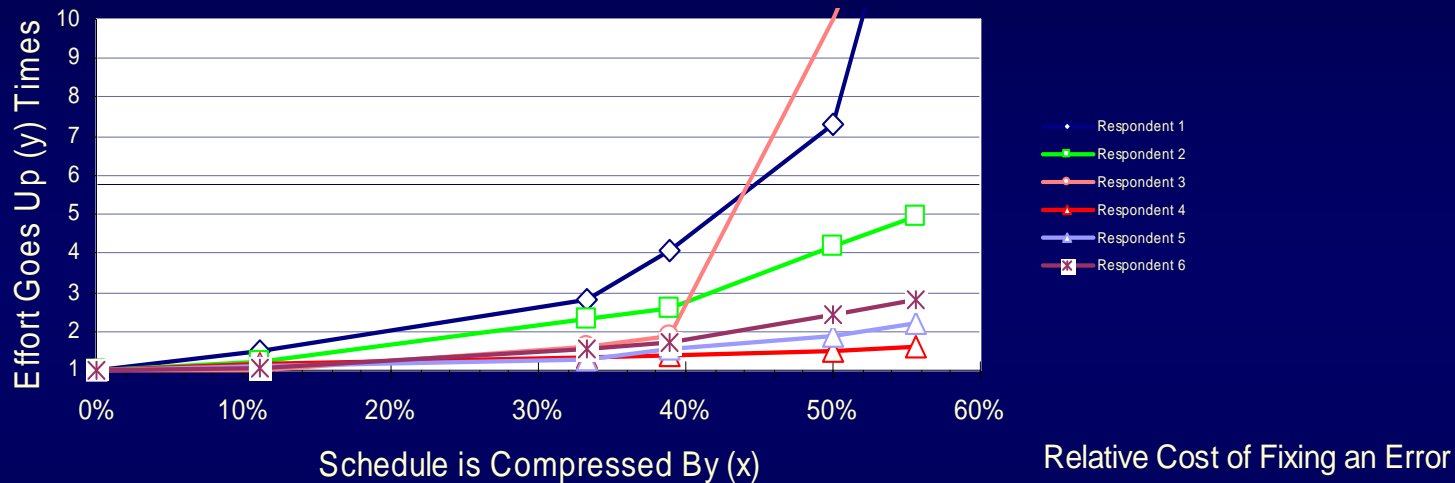
- Processes
- Methods
- Tools
- Generic design rules
- Organization
- News

Organization & resources

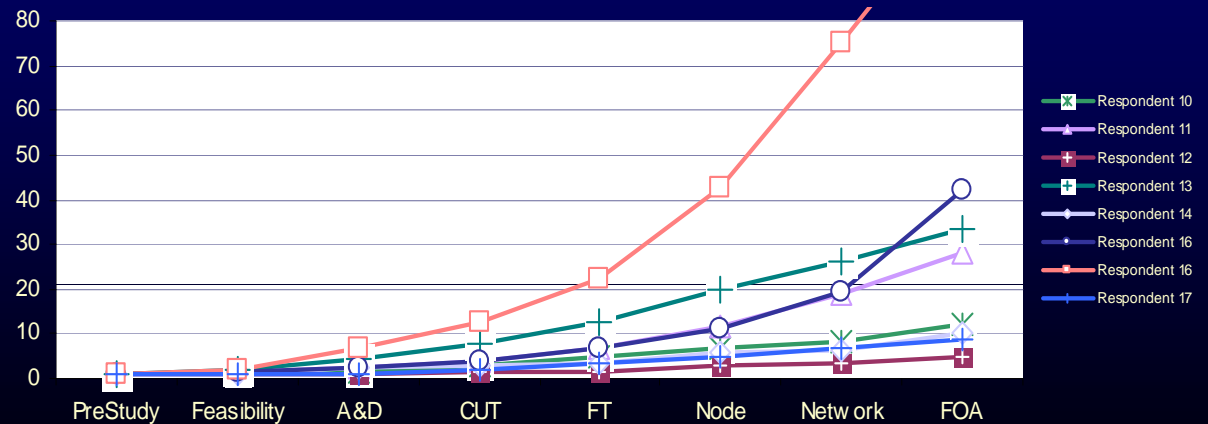
Subject areas

Achieving a common understanding about process behavior : What Happens When People Hold Very Different Views of the World?

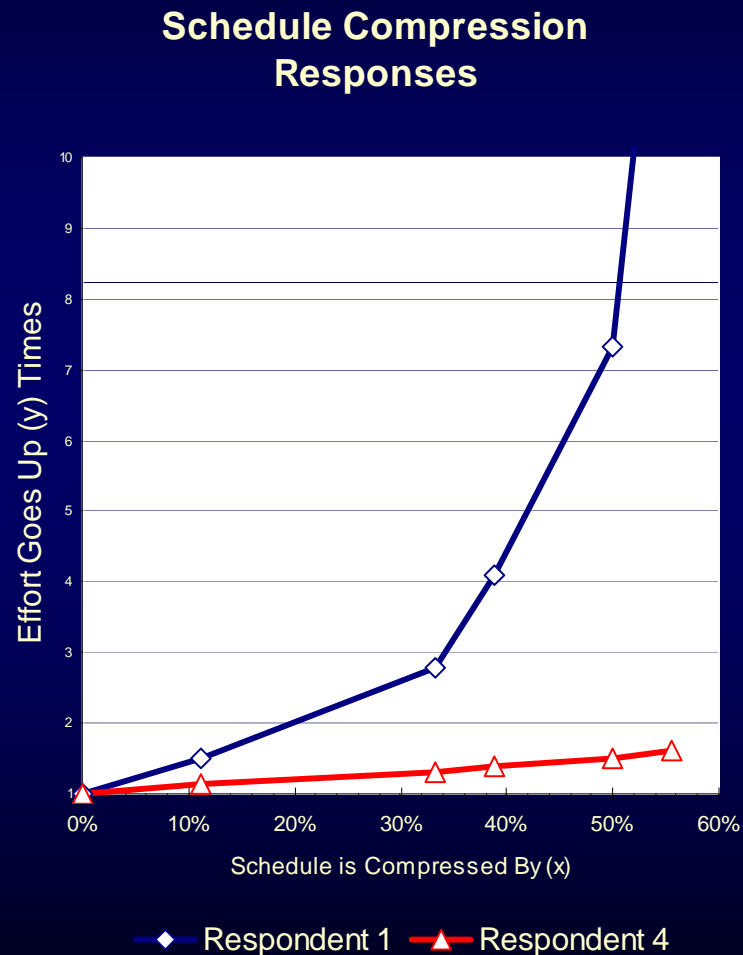
Schedule Compression Responses



Relative Cost of Fixing an Error



The Cathedral and The Bazaar



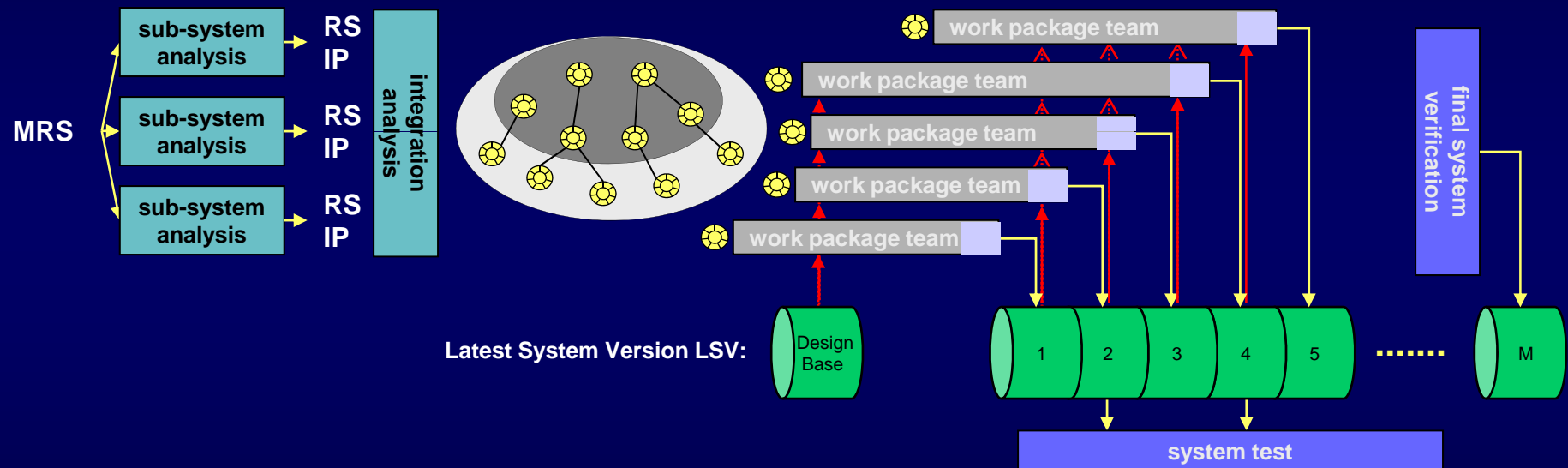
- **The Cathedral (Respondent 1)**
 - Time and effort are not readily interchangeable
 - Beyond a certain point the contribution made by a new resource is offset by coordination overhead
 - Adding a resource to a late project makes it later
 - Co-location
 - Team Leaders
 - Architecture is designed
- **The Bazaar (Respondent 4)**
 - Time and effort are interchangeable
 - Adding a resource to a late project could help recover it
 - Flat organization
 - Lots of low level changes
 - Quick Fixes
 - Architecture emerges

The right level of detail. Allowing for process evolution

- **Inheritance (Consolidating what we have learned)**
 - Processes group
 - Community of practice
 - Council
- **Variation (Allowing for experimentation and new ideas)**
 - Products, technologies & customers
 - People diversity
 - Experience
- **Selection (Best practices)**
 - Defect Prevention Process
 - Benchmarks
 - Post mortems
 - Lessons learned
 - Maturity Assessments

Deploying iPROPS

Integration Centric Engineering



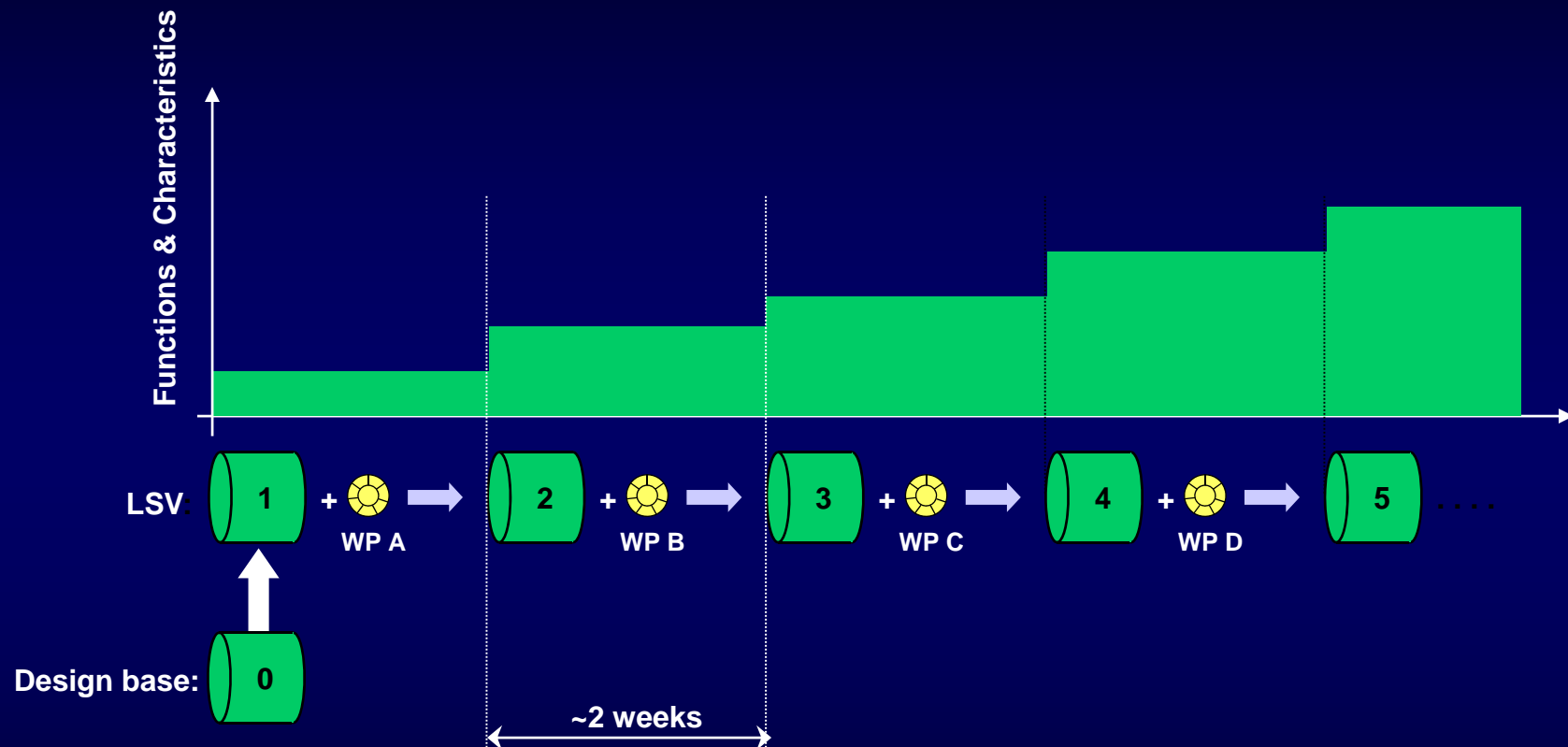
Four (4) fundamental concepts:

- work package
- project anatomy
- work package team
- latest system version (LSV)

Three (3) development principles:

- work is divided into verifiable system enhancements
- teams have an end-to-end responsibility
- teams do verification before integration

The ICE Concept



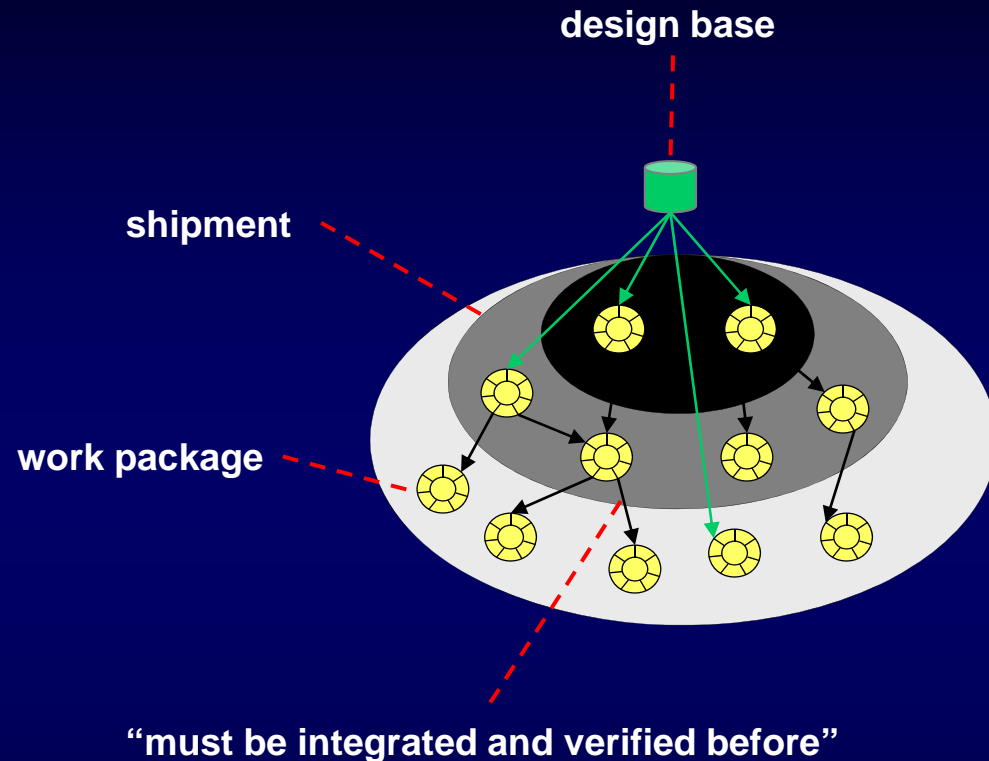
Latest System Version (LSV): A verified up-and-running system version

Work Package (WP): A small addition that can be integrated and verified on system level

The Project Anatomy

The project anatomy shows:

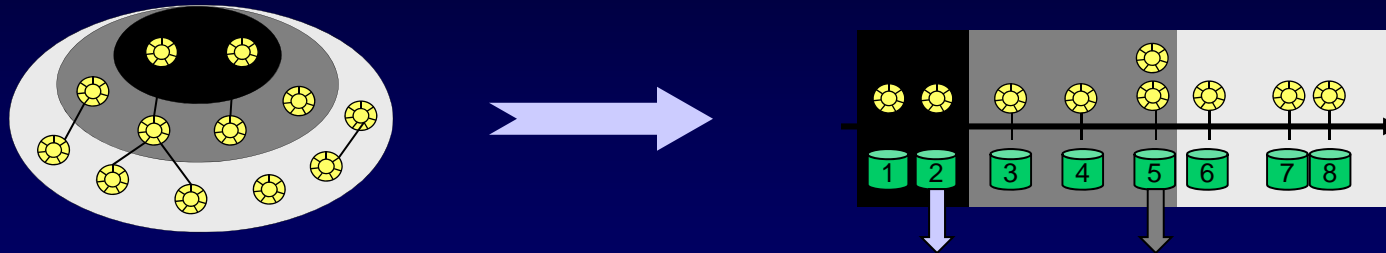
- How the project work has been divided into packages where each package defines a small addition of verifiable system qualities that can result in a new system version.
- Dependencies between packages that constrain the order in which they can be integrated and verified in the latest system version.
- The number of shipments planned for the project, their content in terms of included work packages, and shipment date.



The “size” and number of work packages:

- decides the level of flexibility and control in the project
- is limited by the cost of doing system integration and verification

Toward an Integration Plan

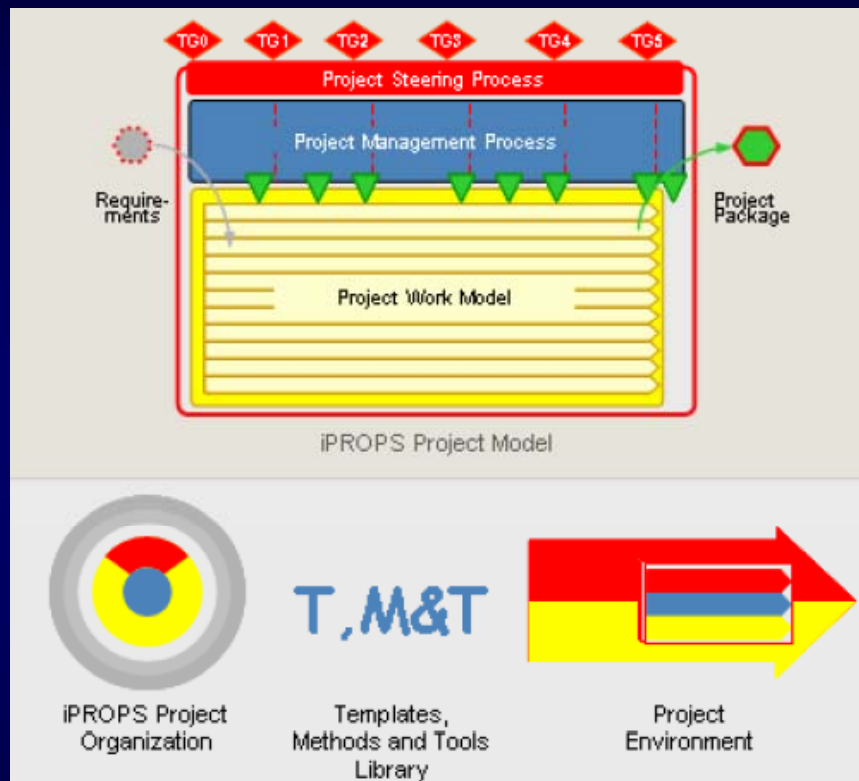


Creating an integration plan is a “scheduling problem” where the following constraints must be considered:

- Shipment dates
- The relation “must be integrated before”
- Resource conflicts
 - People/competence
 - Design objects
 - Test resources
- WP lead-time (size and people)

Without these constraint we could have developed all WPs in parallel and integrated them at the same time into the same LSV.

iPROPS



- **A Project Management Method for Ericsson's global R&D projects**

- **Successor to PROPS (1980-2003)**

- **Provides Ericsson operations a common vocabulary and role descriptions across operating units**

- **Focus on supporting incremental development according to the ICE (Integration Centric Engineering) approach**

ICE & iPROPS Deployment

- **ICE and iPROPS needs to be adapted in order to integrate it to the organization's set of standard processes**
- **Deployment of the global processes is a local responsibility defined and controlled by the Local EPG Improvement Plan.**
- **Three main activities have been identified:**
 - **Integration of iPROPS with other organization's process, e.g. Configuration Management**
 - **Institutionalizing the new process in the organization, e.g. training and coaching**
 - **Review of the processes performance**

Integrating iPROPS with other organization's process

- Review of processes' interfaces toward iPROPS
- Review of the tailoring criteria
- Review of life cycles
- Review of measurement database

Review of Process Interfaces

Ericsson Lab Italy --> ERI Processes Home Page - Microsoft Internet Explorer

Address: http://gpc.teli.ericsson.se/op_dev/PROCESS2002/eriprocesses-pc.shtml

ERICSSON News | Work Support | Across Ericsson | Search intranet

Ericsson Lab Italy

Engineering Process Group - ERI Processes

ERI Core Processes Home Page

Product Mgmt
Development
Support

Layer 1
Layer 2
Layer 3

External
Internal

The ERI Processes can be viewed from three different angles:

- Layered view: it is used to provide different levels of complexity to process users (i.e. process owners need to harmonize multiple platforms, interfaces and activities among processes; developers need to have a simple description to be implemented in projects.).
- Group view: each process is easily recognized and

Focus on

- The Spirit of Process
- Process Architecture
 - Layered Structure
- Process Discipline
 - Corporate Directives
 - FEAF Rules
 - FEAF List
 - PRIM D-Classes
 - Components
 - Process Owner
 - PO List per name
 - PO List per process
- ERI Process Library
- CC Web Guidelines
- ERI Process Baseline
- CRs Handling
- CQ Web Guidelines

Useful Links

- EPG Home
- Operational Dev.

ClearCase Web Interface - Microsoft Internet Explorer


ClearCase Web Interface


All ERI Processes are stored, under configuration control, in a ClearCase VOB and are readable with the ClearCase WEB Interface. All process links, in the "ERI Processes Home Page", let you reach the related documentation in the VOB. The first time you use this environment you have to provide user, password and a view.


1. Username: viewer
Password: viewer1
Select "Login".

2. Select a view: EriProcesses
Select "OK".

3. You are ready to navigate in the VOB. Select an item to open it.

History
Select  to see the history of a file/directory.

Properties
Select  to see the properties of a file/directory.

Download
Check one/more documents and then select  on the top bar to download them.

Select View	Name	Size	Modified	Version
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
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ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0
ERIPROCESSES	ERIPROCESSES	1024	Aug 12 09:14	1.0

ClearCase Web Interface - Microsoft Internet Explorer

ClearQuest Web Interface

All ERI Processes are baselined and under configuration control. All changes must be traced and authorized. ClearQuest is used to handle Change Request on all ERI processes.

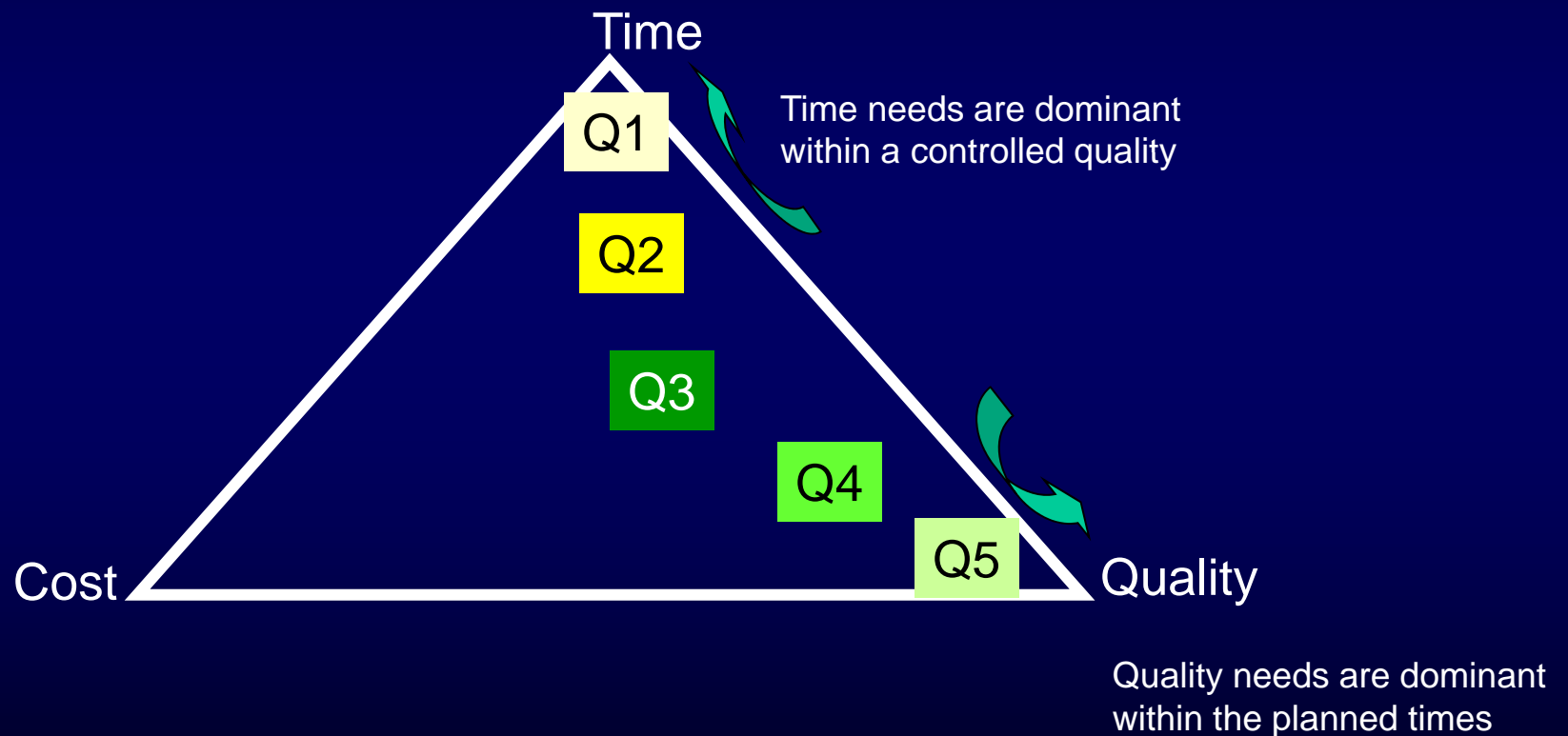
Username: guest
Password: guest
Database: ERIPR
Select "Logon".

Submit a new CR
To insert a new CR, select the *Submit* option with *CRonProcess* parameter.

Query / Chart
Select, in the *Public Queries* folder, a predefined query/chart.

Note: You are only authorized to insert or read a CR. Actions as *Analyse*, *Assign*, *Grant*, *Reject*, *Modify* or *Delete* are reserved to an administrator user.

Review of the Tailoring Criteria (1/3)



Review of Tailoring Criteria (2/3)

	Time	Quality	Cost
Q1	Time pressure dominant. Ensure achievement of challenging Time targets	Minimized risks	Level appropriate to the Time expectations
Q2	Time pressure dominant. Ensure achievement of challenging Time targets	Minimized risks	Level appropriate to the Time expectations
Q3	Balanced with Quality. Confidence on Time targets	Balanced with Time. Prediction on statistical basis	Optimize costs
Q4	High level of confidence on planned times	Quality dominant. Consistent prediction on statistical basis	Level appropriate to the Quality expectations
Q5	High level of confidence on planned times	Quality dominant. Consistent prediction on statistical basis	Level appropriate to the Quality expectations

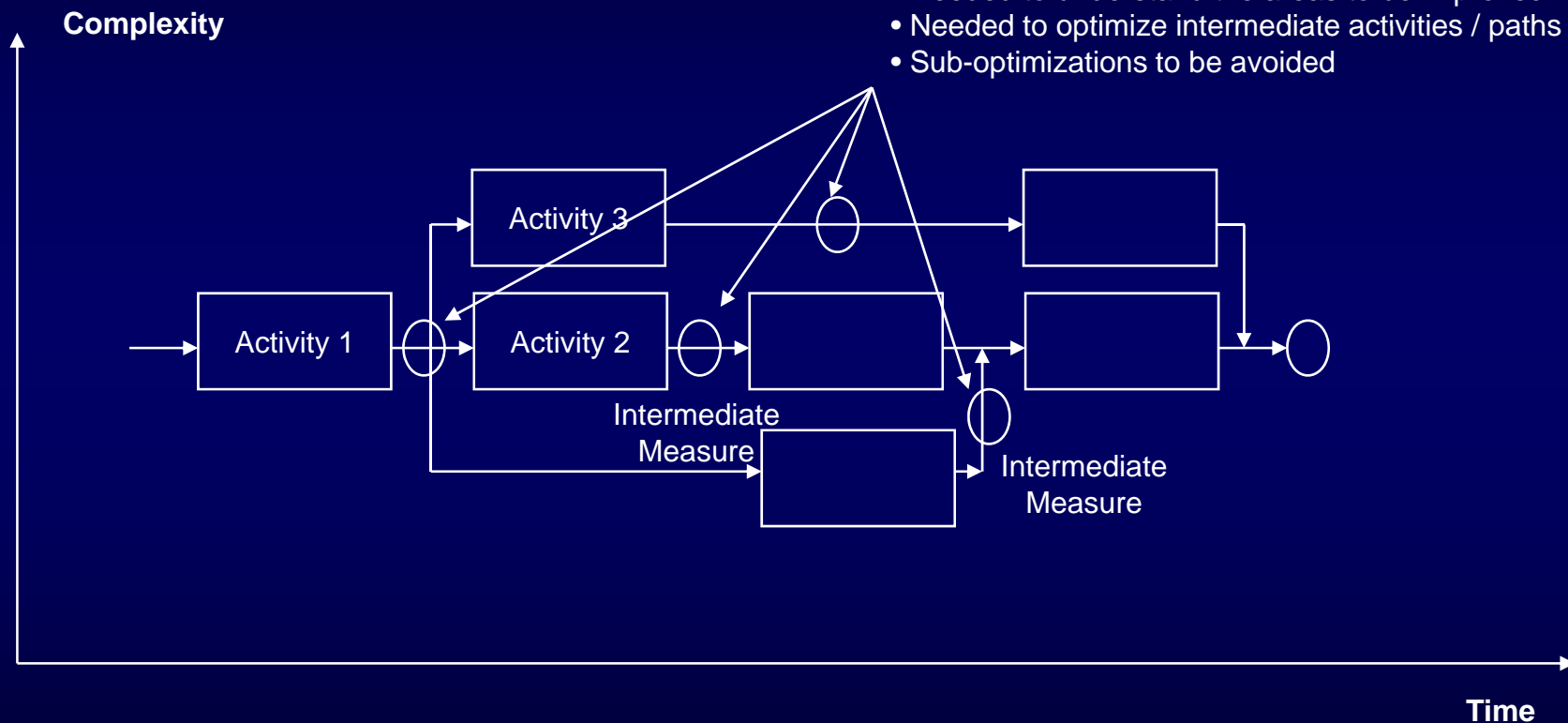
Review of Tailoring Criteria (3/3)

White	New proposal				
Yellow	Under review				
Light Green	Approved by the technical Committee				
Dark Green	Approved by the Management				
Dark RED	Proposal needing deep review				
Areas	Criteria title Q1	Criteria title Q2	Criteria title Q3	Criteria title Q4	Criteria title Q5
Development Process				Team working by Clean Room approaches.	Team working by Clean Room approaches.
	A written test strategy	A written test strategy	A written test strategy	A written test strategy	A written test strategy
	The test strategy verified by a group of expert.	The test strategy verified by a group of expert.	The test strategy verified by a group of expert.	The test strategy verified by a group of expert.	The test strategy verified by a group of expert.
	Early planning and implementation of activities, impacting development time performances.	Early planning and implementation of activities, impacting development time performances.			BT Coverage at least 95%
				The # of TC at BT, MT and FT correlated	The # of TC at BT, MT and FT correlated
				MT mandatory	MT mandatory
					No test activity can be skipped
	Existence of a detailed WBS	Existence of a detailed WBS	Existence of a detailed WBS	Existence of a detailed WBS	Existence of a detailed WBS
				Minimize overlapping of verification activities (DC, BT, etc.)	Absolutely avoid overlapping of verification activities (DC, BT, etc.)
		RT coverage at least at 20%	RT coverage at least at 30%	RT coverage at least at 70% (40%)	RT coverage at 100% (50%)
			DC performed by at least one expert on the potential stinker blocks.	DC performed by at least one experts on all the design objects.	DC performed by at least two experts on all the design objects.
	Implementation directly from the IP/FF and IWD (see notes)	Implementation directly from the IP/FF and IWD (see notes).			

Review of Measurement Database (1/2)

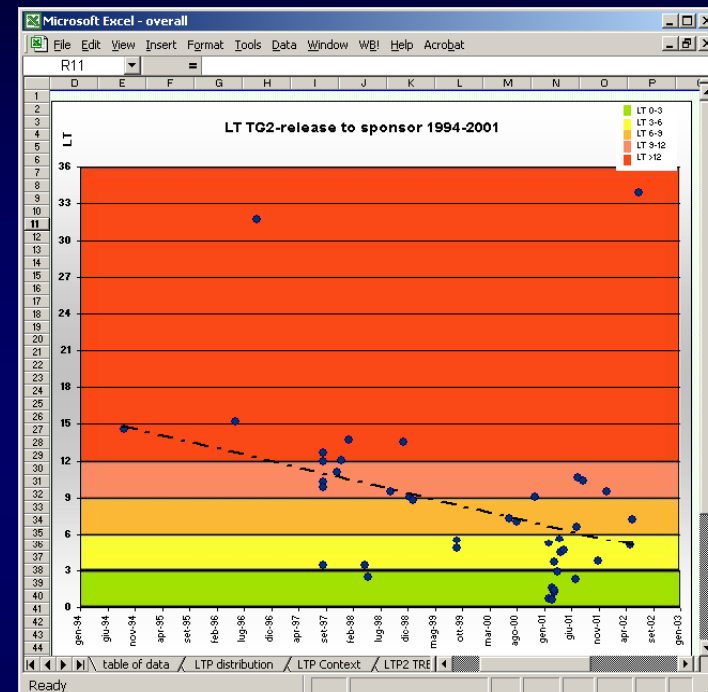
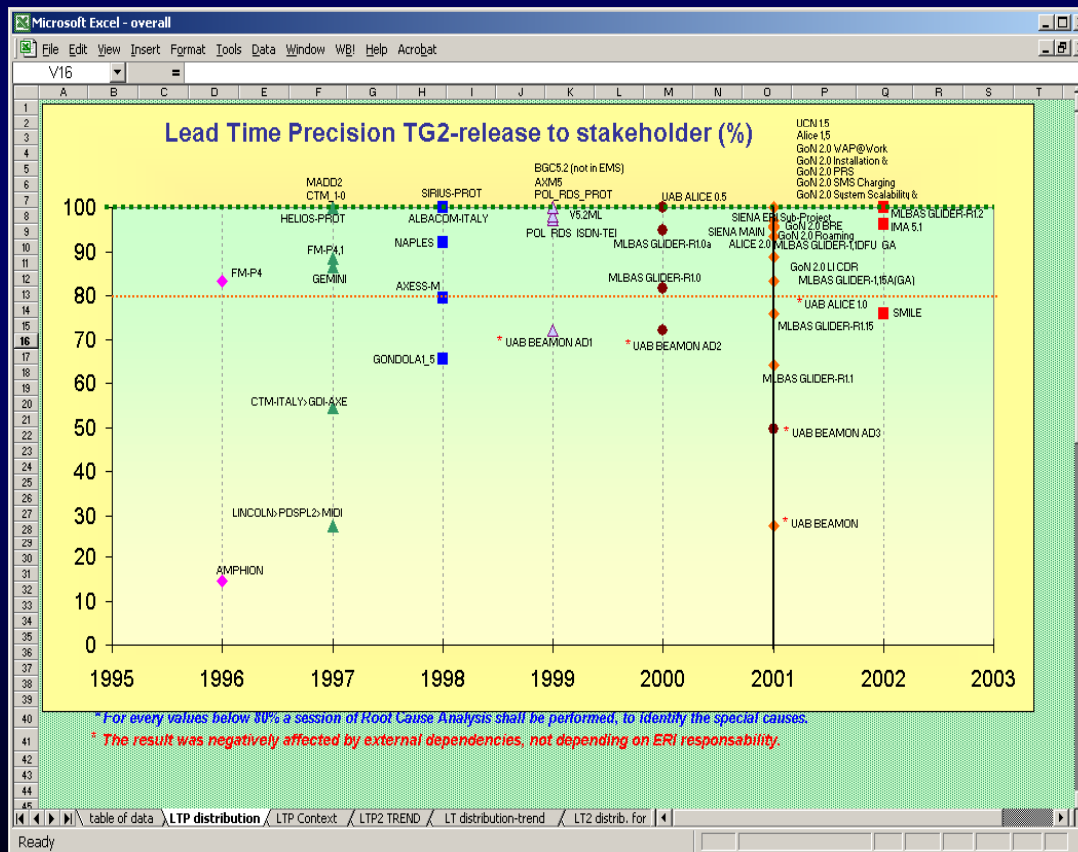
KPI

- Needed to understand the causes
- Needed to understand the areas to be improved
- Needed to optimize intermediate activities / paths
- Sub-optimizations to be avoided

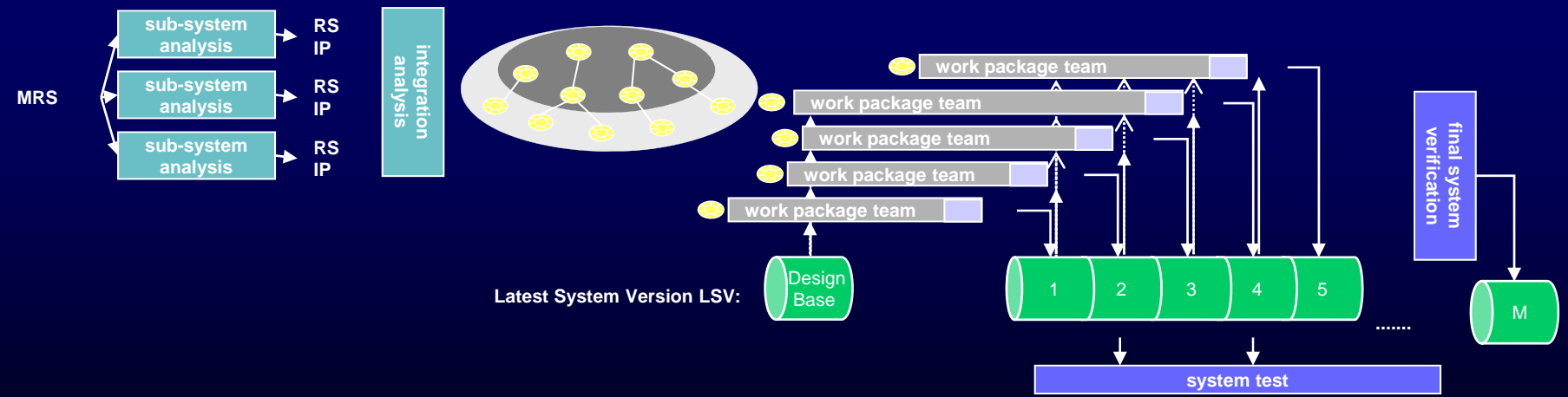
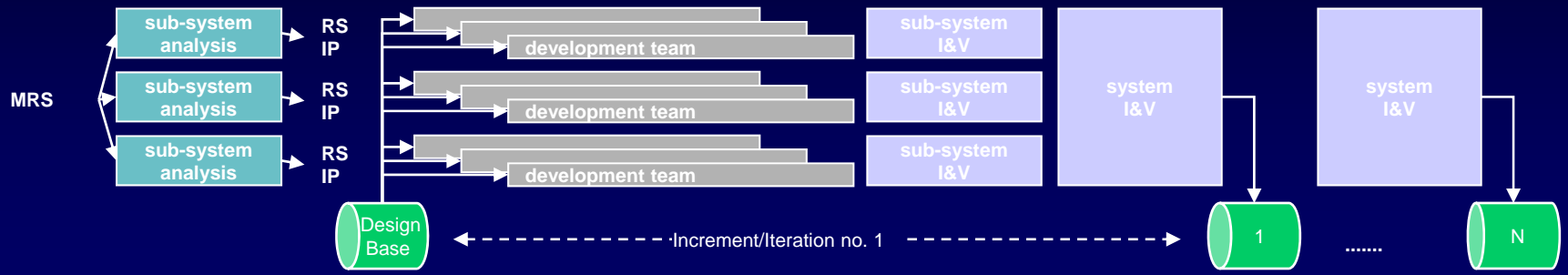


KPI: Key Performance Indicators

Review of Measurement Database (2/2)



Review of Life Cycle



Institutionalizing iPROPS in the organization

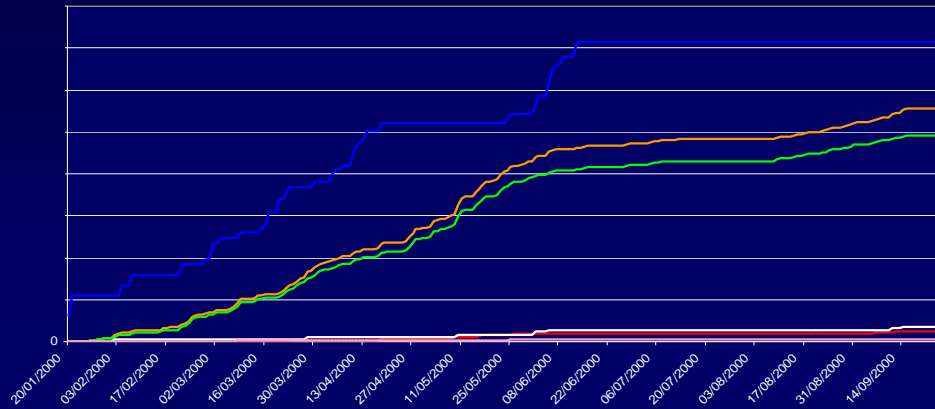
- Training & coaching (in the project, in the organization)
- Tracking of the effectiveness of the competence in the project through Project Effective Staffing (PES) activity
- Evaluation of the result at organizational level and actions to close the gap.

Project Effective Staffing (PES)

- **Is an activity executed at organizational level for each running projects every six months to ensure that projects are properly staffed by looking at the confidence of resources as to their level of competence for handling the current responsibilities. It is performed by means of a survey analysis that consists of three different checks:**
 - **Technical Competence, that specifies the confidence in the technical and product competence needed to perform the current activities. Measurement used is the Technical Competence Index (TCI)**
 - **Work Environment, that specifies the confidence about the adequacy of the work environment in terms of processes, tools. Measurement used is the Work Environment Index.**
 - **Program Manager evaluation, that specifies how the program managers evaluate the staffing in size and competence in the projects.**

Review of process performance

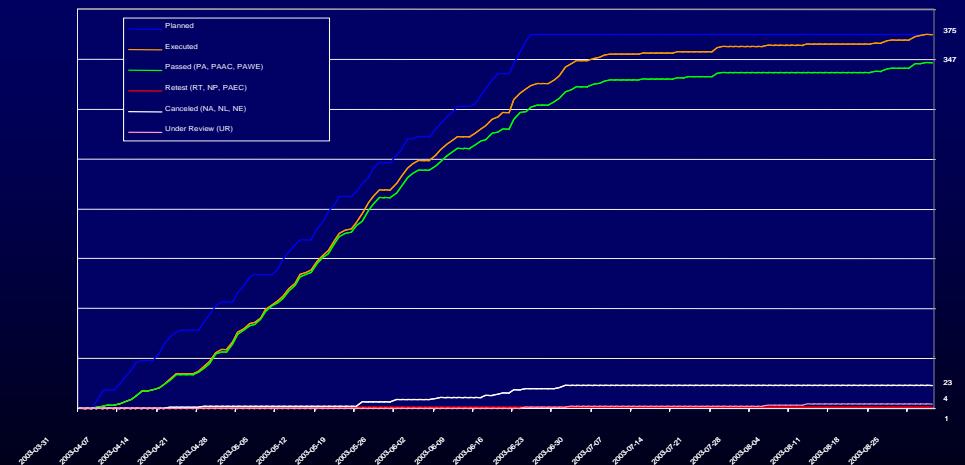
Progress Report Tue Sep 26 23:40:23 GMT+01:00 2000 (RFA1,RFA2)



Analysis of test cases planned and executed in Release 8 using standard approach

Progress Report Fri Aug 29 11:45:43 CEST 2003 (BSC_R10MDSV)

Analysis of test cases planned and executed in Release 9 using ICE / iPROPS



Review of process performance (1/3)

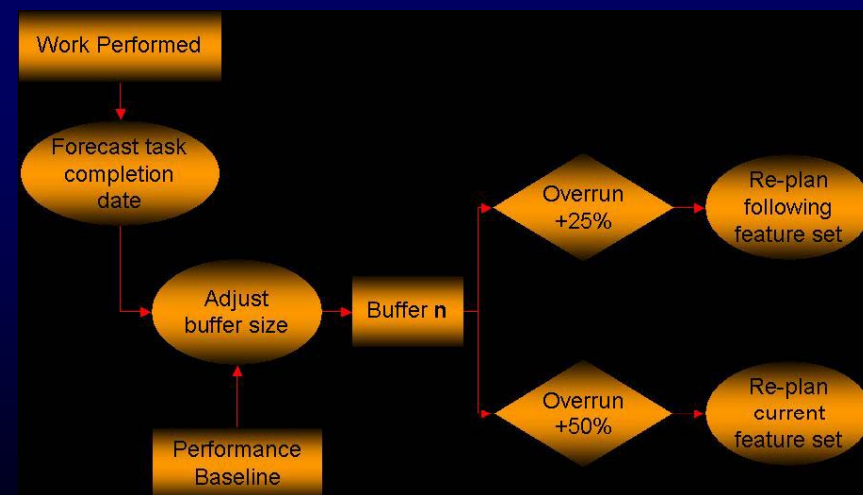
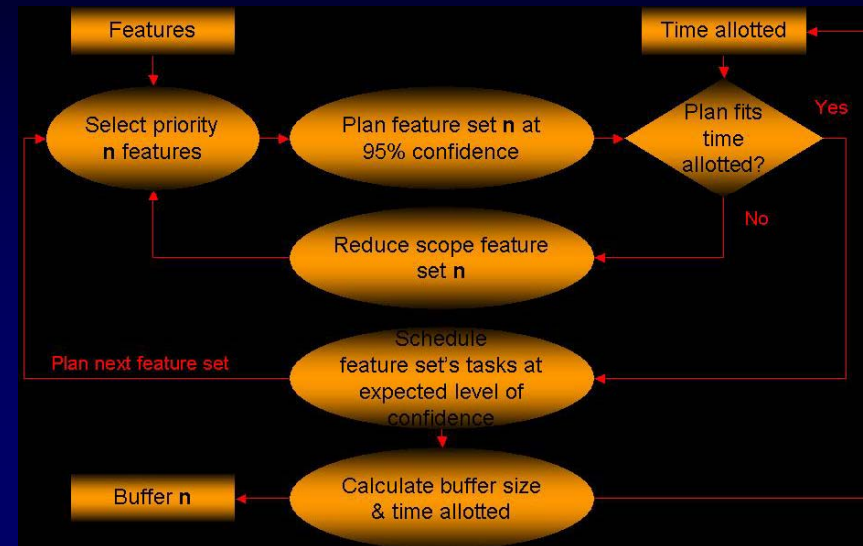
- **iPROPS performance is measured using a Productivity Index (MPI) that the organization has been measuring since 1999.**
- **The KPIs used to forecast the Lead Time of a project and the capability of the organization to achieve its quantitative goals are based on**
 - **Schedule and effort models**
 - **Fault slip through**

Review process performance model (2/3)

- **Adopting iPROPS has forced a change in KPIs due to the facts that:**
 - **A project (sub project) will deliver the product according to a specified set of LSV (WP)**
 - **Each LSV / WP is not independent: a delay in a WP / LSV might be propagated exponentially through the anatomy network**
 - **The parallel development implies a different weight for some activities like merging and regression that were negligible in the standard development**
 - **The parallel development implies a better Time to Market, but it increases the staffing cost.**

Review process performance model (3/3)

- A new KPI, based on the definition of a schedule buffer for each WP (design and testing) derived from a triangular distribution of the activities' lead time estimates, is under evaluation for .
- The buffer consumption is correlated to the remaining time to achieve a milestone. Different levels of risks are handled according to different scenarios: in the most critical, it is request to re-plan and compute a new buffer size.



Summary

In this presentation we have tried to:

- **Highlight some of the challenges related to the application of the CMMI to global processes**
- **The challenges of adapting a standard process to a local practice**
- **Share some Ericsson's experiences with you**

We hope you have enjoyed it and learned something new

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