The "Internal Offshore" Experience at Reuters

Paul Iredale

Topics

- **Reuters Overview**

- **Staff Recruitment**

- **Product Transition**

- **Process Management**

- **Offshore Development**

- **Future**

Reuters Group

- **Supplies the world's financial markets and news media with information, news and technology solutions**

Global Business

- **Reuters serves 151 countries**
- **558,000 professionals in 50,600 locations use Reuters information and news**
- **Data provided on 940,000+ financial instruments**
- **Financial information sources from 263 exchanges or OTC markets**
- **5,036 clients contribute prices, opinions and analysis**
- **73+ million unique visitors per month on 1,400+ websites access Reuters content - almost 20% of Internet users**
- **2,157 journalists, photographers and camera operators in 190 bureaux**
- **News provided in 24 languages**
- **About 12,000 Reuters headlines and two million words produced daily**
- **A £4.00 billion business**

Global Development

- 15+ Development groups
- 12 Countries (France, Germany, Hong Kong, Japan, UK, USA, Thailand)
- Group size from 5 - 500
- Overall about 1500 software developers

- Real Time feeds
- Database systems
- Administration systems
- Client site systems
- Graphical User interfaces
- WEB Server and Browser developments

Challenges

- **A global business requiring global IT services and support 24/7**

- **Software applications are vital for the business to achieving competitive advantage**

- **A rapidly changing business environment with complex financial products and services as the norm.**

- **Financial impact of software defects enormous**

- **Rapid software development is necessary to allow the business to exploit financial opportunities**

- **Complex highly interconnected architecture**

SPI History

- 1996 - first SPI initiative HP approach
- 1996 - CMM adopted at the corporate level
- 1997 - First CMM Level 2 assessment
- 1998 - 14 Formal assessments performed
- 1999 - Thailand Development achieves CMM Level 2
- 1999 - First CMM Level 3 assessment
- 2000 - 3 more groups achieve CMM Level 3
- 2001 - Decision to open a Software Center in Bangkok
- 2002 - Reuters opens Software Center
- 2004 - Reuters first CMMI level 5 group

Bangkok Concept

- High Productivity

- Low Cost

- Software Development Centeralised

- Maximize Reuse

- Operates at high maturity (Implies high quality)

- Greater control over core development

Bangkok Goals

- Hire 600 staff by end 2005

- Transition 150+ products from other development centers

- Attain CMMI Level 5

- Build a culture of continuous improvement (Six Sigma)

- Create an OFFSHORE development group to be used for strategic software development in Reuters

Staff Recruitment

Goal - Hire 600 staff by end 2005

Recruitment

- New graduates
  - University Program
    - University Presentation
      - Computer Engineering and related faculties
      - Job Fairs
    - Internship Program
    - Scholarships
- Experienced Staff
  - Job advertisement
    - Newspaper
    - Internet
  - Referral Program
  - Recruiting Agencies

Recruitment Techniques

- First screening

  - Recruitment Technical Exam

- Second screening

  - Interview with HR and Technical Group Leader

- Third screening

  - Interview with HR and Development Manager

Boot Camp

- An induction program for staff who have just joined the company
  - Duration : Around one month
  - Coverage:
    - Introduction to Reuters Products
    - Market Knowledge
      - Financial markets
    - Software Process
    - Technical Programming e.g.
      - C++
      - Unix
    - English communication
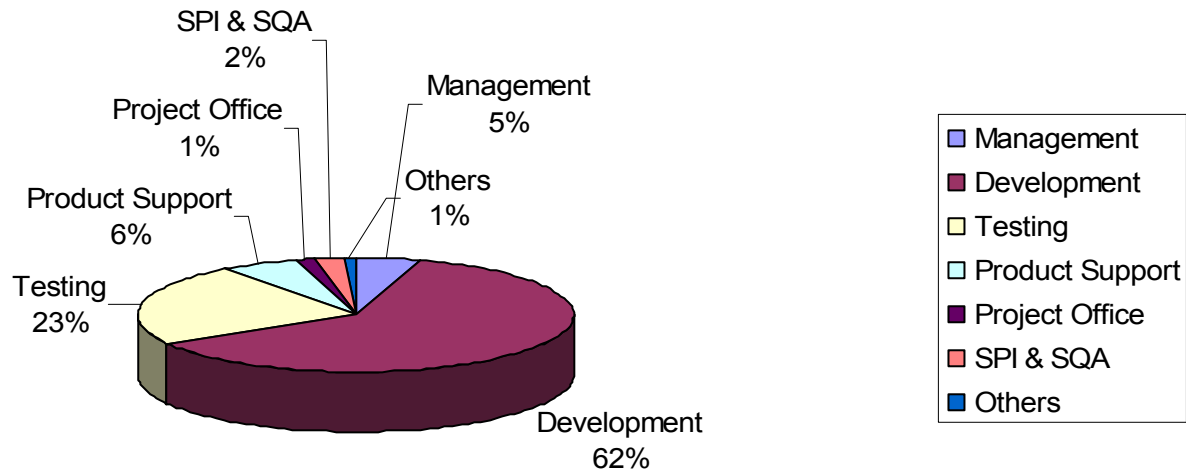
RDM - Roles

RDM = Resource Development Manager

- A permanent reporting line for all staff
- Response to project resource requests.
- Liaison with development staff to find best fit projects.
- Objectives and goals setting for development staff
- Staff career development counselor and planning
- An RDM manages approximately 50 staff
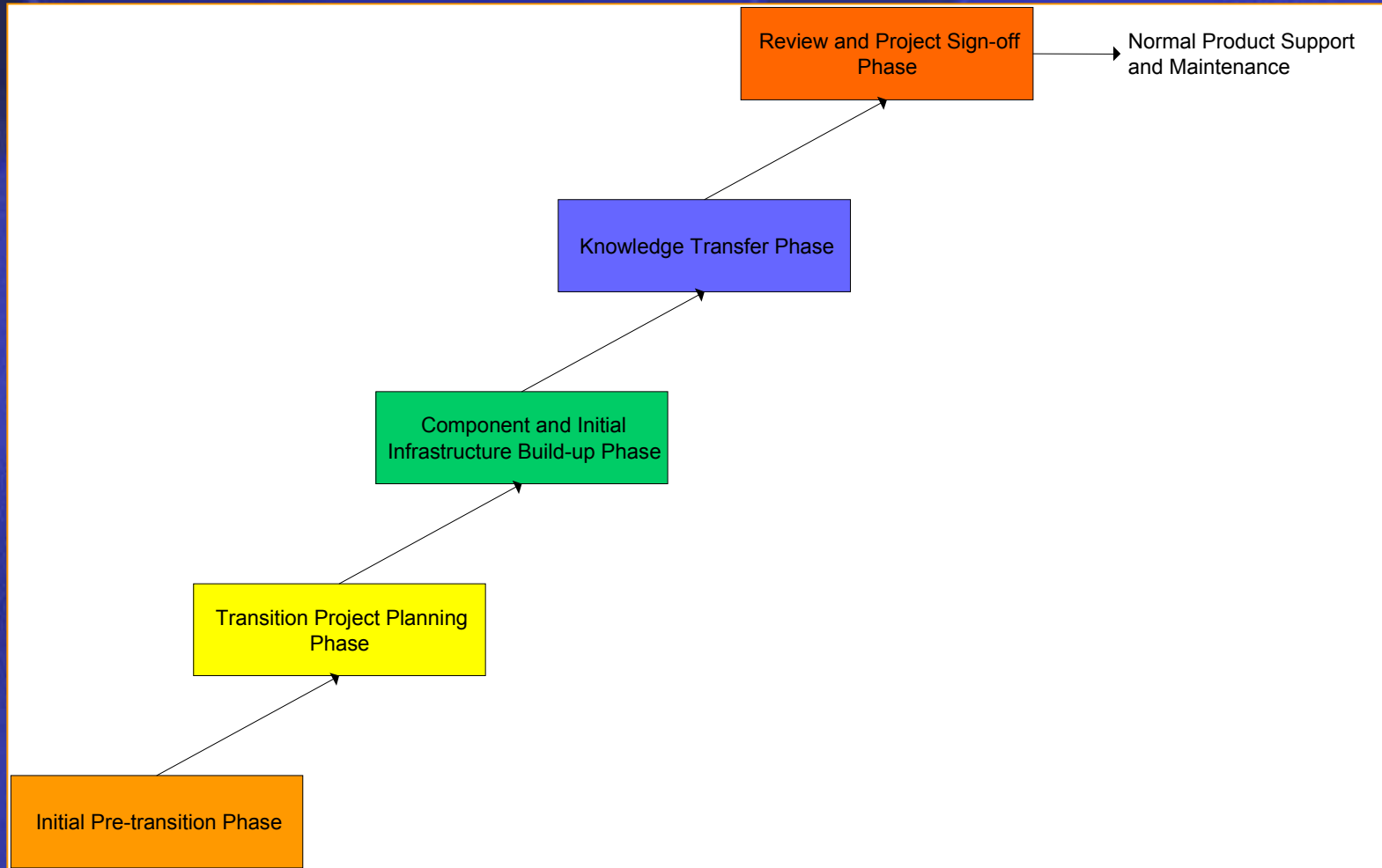
Staff Recruitment Metrics

RSTL Staff - since Nov 02
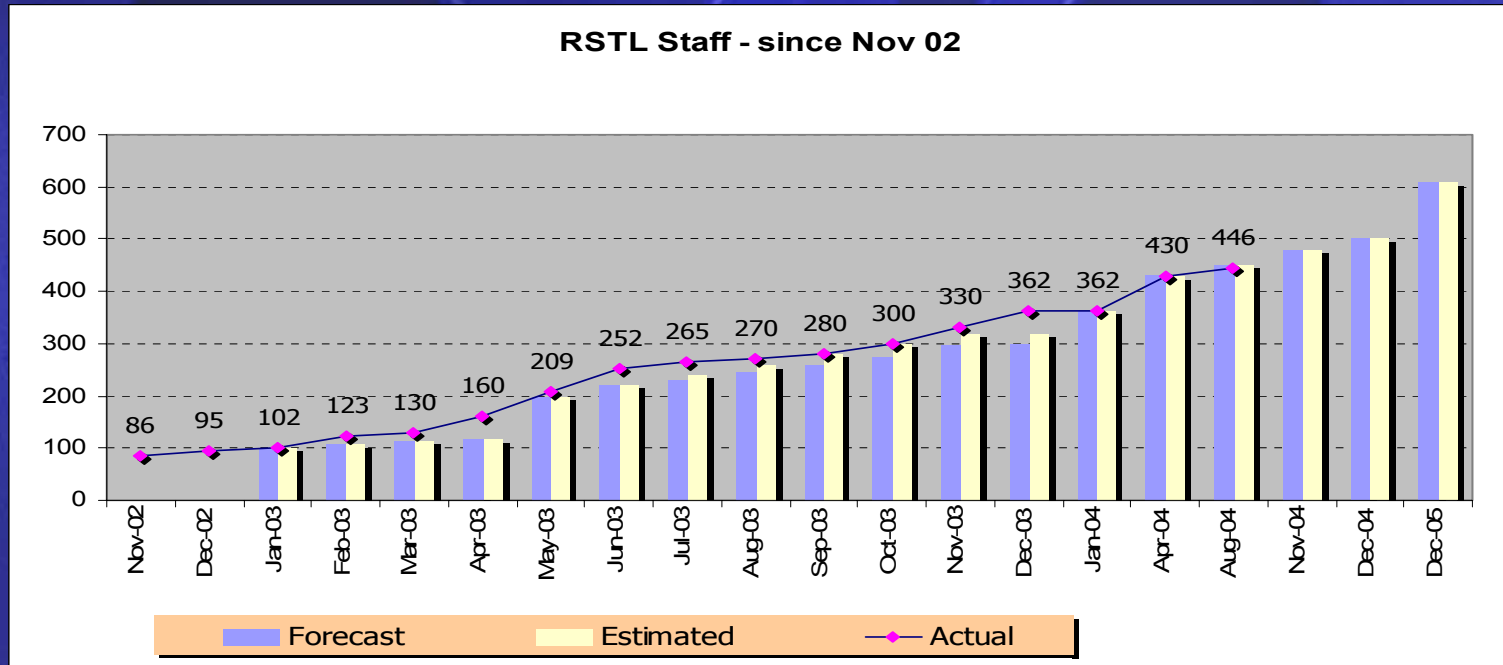
Staff Recruitment Metrics

Staff Proportion

SPI & SQA
2%

Project Office
1%

Product Support
6%

Testing
23%

Management
5%

Others
1%

Development
62%

Legend:
- Management
- Development
- Testing
- Product Support
- Project Office
- SPI & SQA
- Others

Product Transition

Goal - Transition 150+ products from other development centers

Product Transition Lifecycle -1

Review and Project Sign-off Phase → Normal Product Support and Maintenance

Knowledge Transfer Phase

Component and Initial Infrastructure Build-up Phase

Transition Project Planning Phase

Initial Pre-transition Phase

REUTERS

Product Transition Lifecycle

- Initial Pre-Transition Phase
  - To determine if product transition should get go-ahead, taking the following factors into consideration
    - Development scope (e.g., critical bug fix only)
    - Resource and skill requirements
    - Time constraints
      - Availability of current resource at Original Site
      - RSTL resource availability

Product Transition Lifecycle

- Transition Planning Phase:
  - Work Breakdown Structure
  - Estimation of effort, schedule, cost
  - Deliverables & Project libraries
  - Critical resources (e.g., feeds, lab space)
  - Intergroup communication/escalation path
  - Risks

Product Transition Lifecycle

- Component and Initial Infrastructure Buildup Phase
  - A period for self study, preparation and familiarization of product before knowledge transfer training
    - Initial Environment Set-up
    - Study of product and release documents
    - Pre-requisite training (e.g., RV training for TIB products)
    - Source code (if possible)

Product Transition Lifecycle

- Knowledge Transfer Phase
  - Main training phase
    - Either at original site or at RSTL
  - Cover 3 streams: development, testing and support
  - May need to produce/update documents to record the received knowledge. Original owners should review these updated documents.
  - Create a checklist for knowledge transfer
  - Exercises assigned by the original owners as part of knowledge transfer training
  - Daily or Weekly report as a progress tracking mechanism

Product Transition Lifecycle

- Review and Project Sign-off Phase
  - Complete the setup and verification of development/testing/support environments
  - Complete the asset transfer from the original site
  - Agree the SLA/support guidelines with Product Manager and Second Level Support

Culture Differences in Product Transitions

- Dealing with Culture differences is important in Product Transition:
  - Thai staff (as Trainees)
    - Modest
    - Good listeners, not likely to ask
  - US / European staff (as Trainers)
    - Expect the trainees to discuss/ask

Transition Manager and Group Leader Roles

- Transition Manager
  - Be the project owner and serve as a single point of contact and manage overall schedule of the transition along with ensuring resource availability during the transition.

- Group Leader
  - Act as an overall engineering team leader for the knowledge transfer training

These two roles are key to the success of the product transition:
  - Experience in leading teams plus related technical and product knowledge very useful when handling culture differences

Transition Metrics
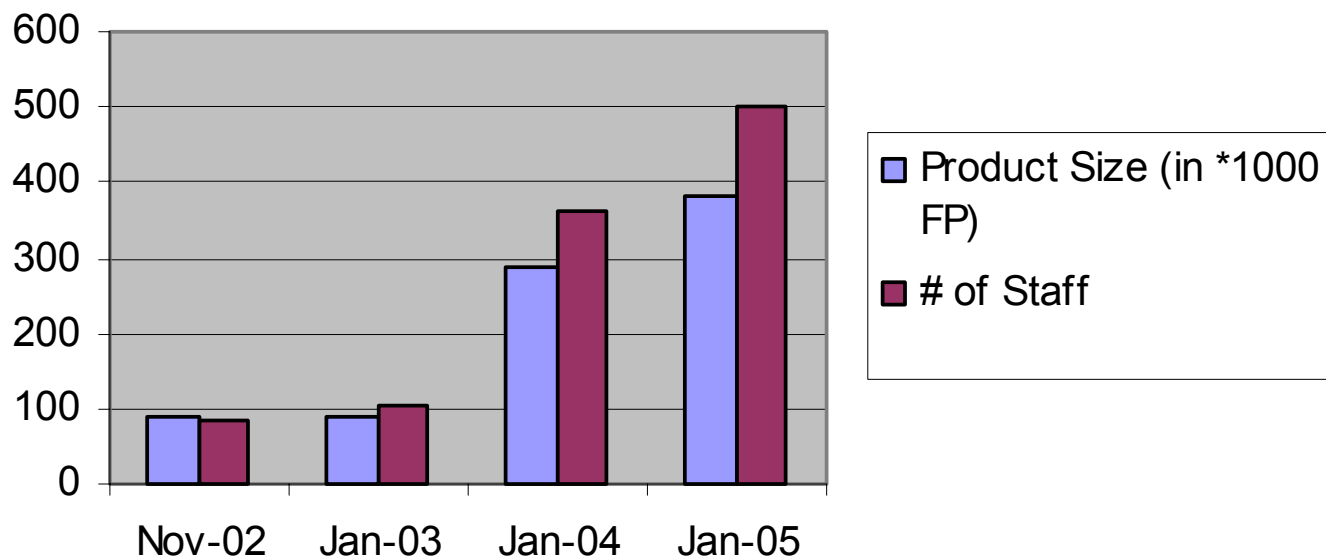
Transition Metrics

REUTERS
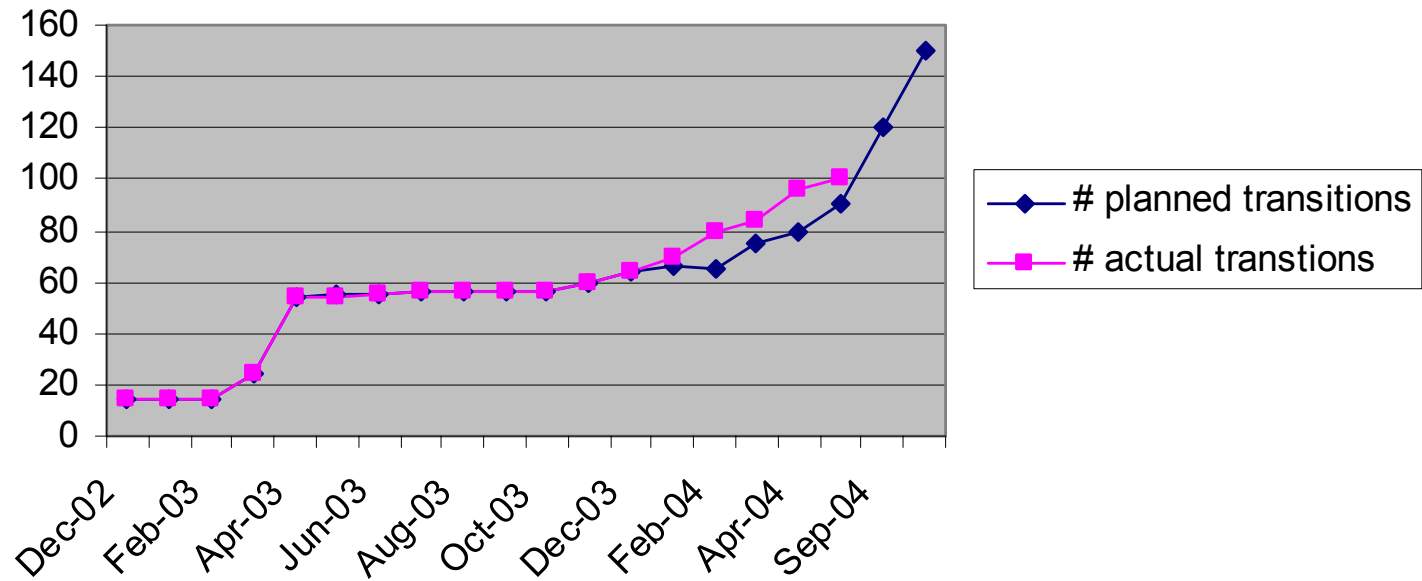
Process Management

Goal - Attain CMMI Level 5
Goal - Build a culture of continuous improvement (Six Sigma)

History

- 1999 - Thailand development group achieves CMM level 2
- 2001 - Decision to open Bangkok Software Center
- 2002 – Software Center opens
- 2003 - Software Center achieves CMM Level 3
- 2003 - PI organisation in place for CMMI Level 5
- 2004 – Software Center achieves CMMI Level 5

PI Organisation

Process Support Director

- **Process Technology Manager** +7
- **Process Improvement Manager** +4
- **Process Training Manager** +1
- **SQA Manager** +9
- **Project Office Manager** +4
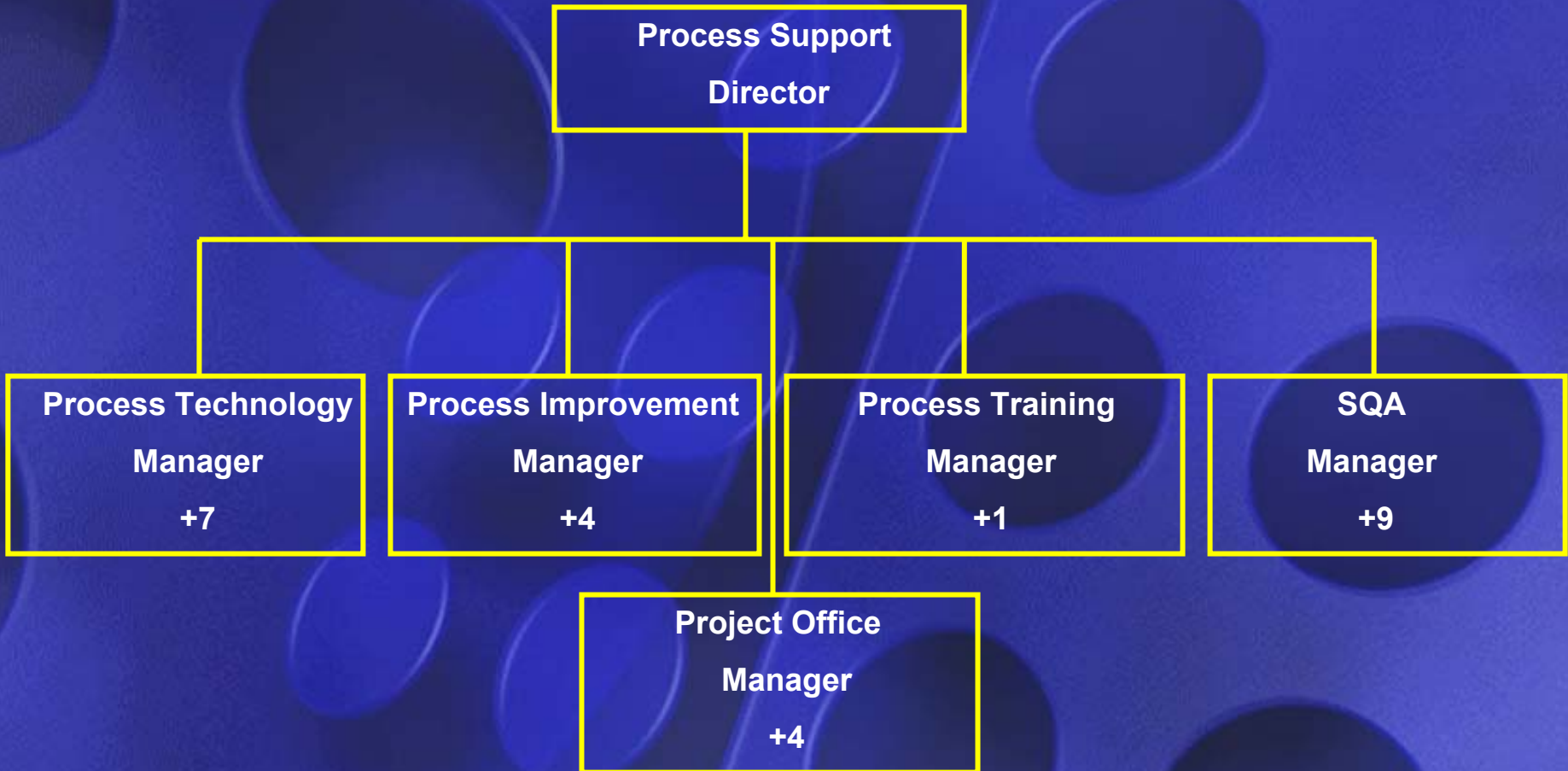
PI Activities

- Roadmap
- Plans – Technology, Process and Metrics
- Requirements Catalogue
- Mini assessments every quarter
- Monthly scorecard on progress

PI Roadmap
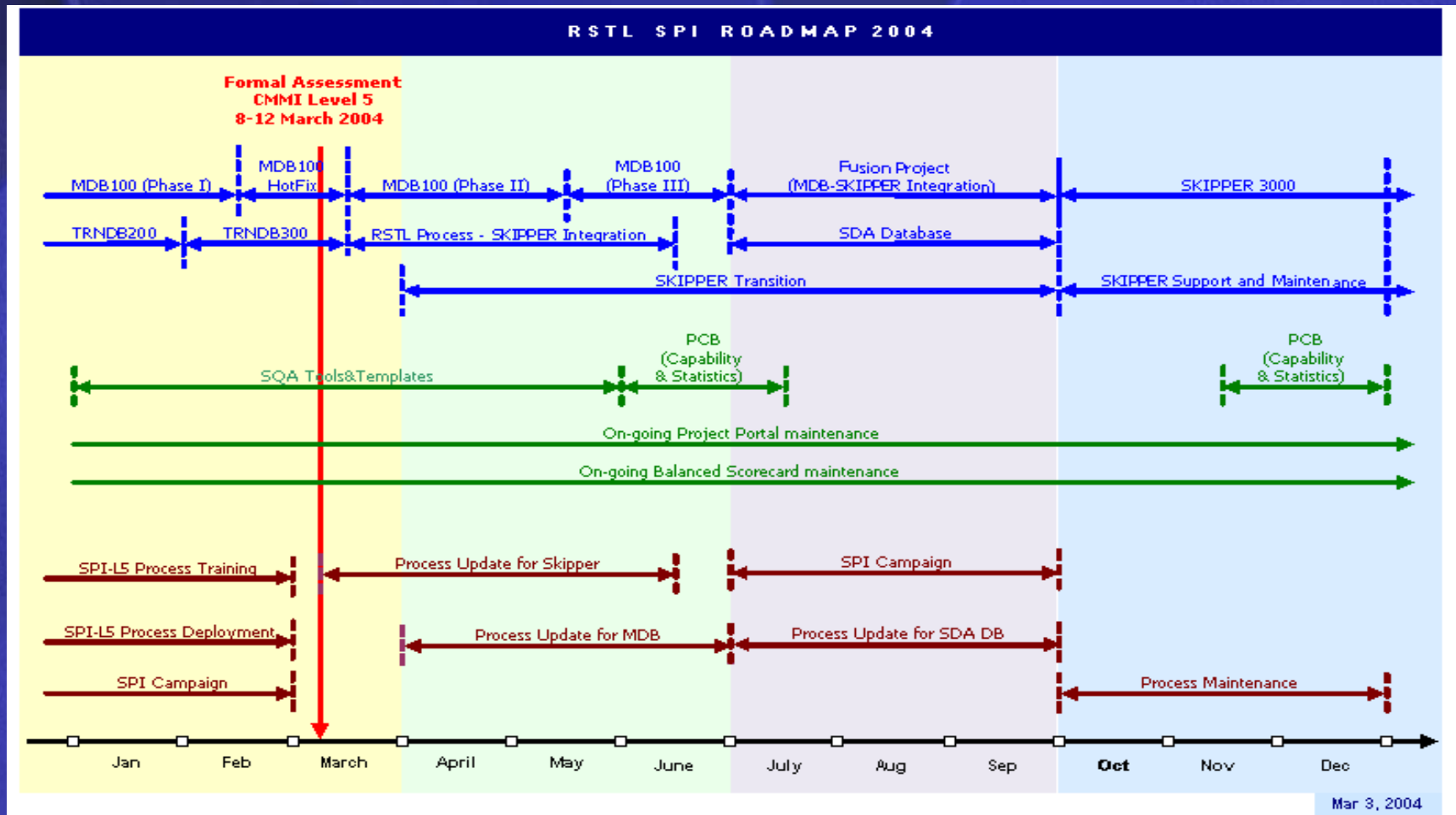
Technology

- Project Portal
- Metrics Database
- Problem tracking tool
- Personal Development and Training database

Process

- Level 4/5 Process maps and guidelines
- Web based process library
- Assessments and mapping to CMMI model
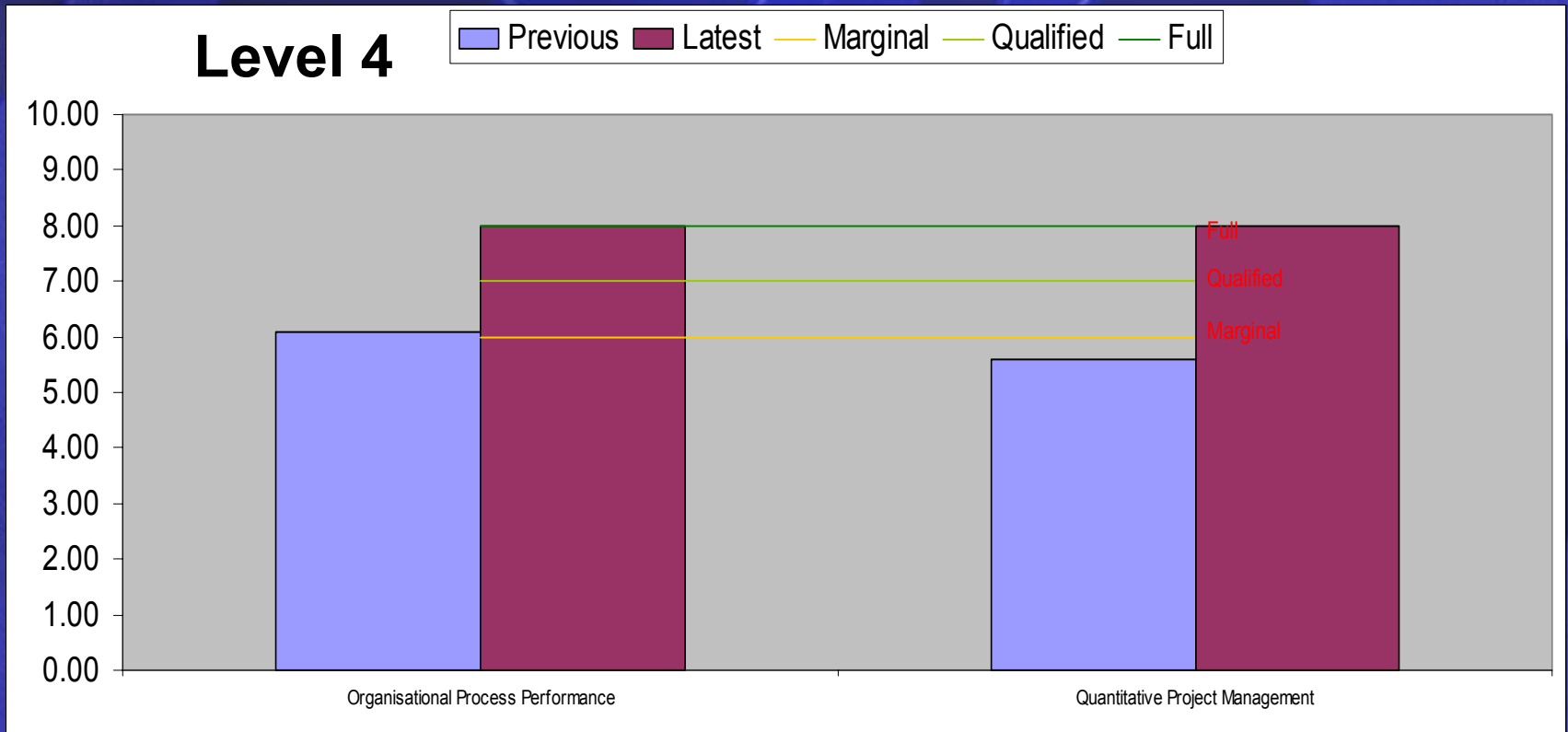
Metrics

- Balanced Scorecard
- Capability baseline
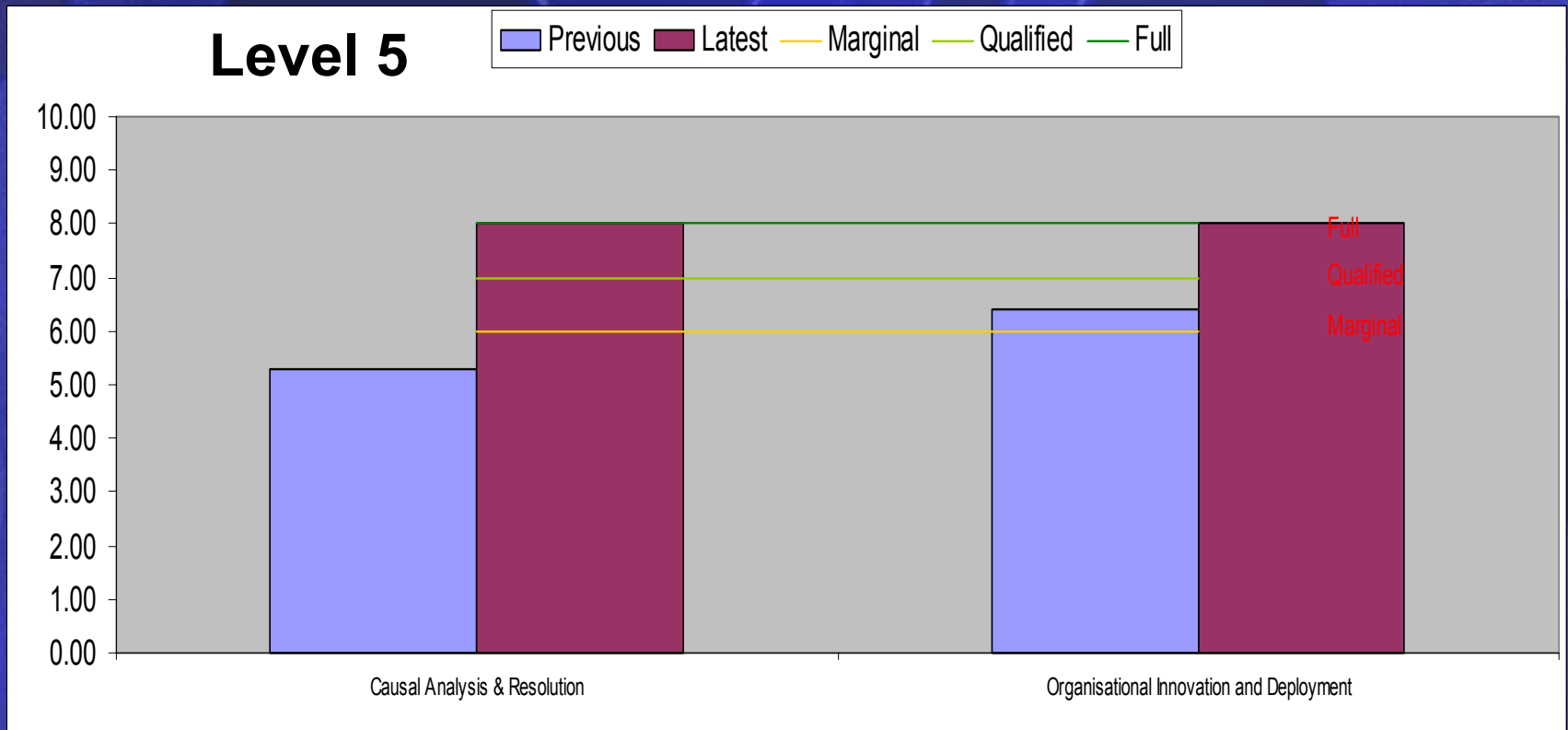- Monthly metrics reporting

CMMI Calculator Scores

CMMI Calculator Scores

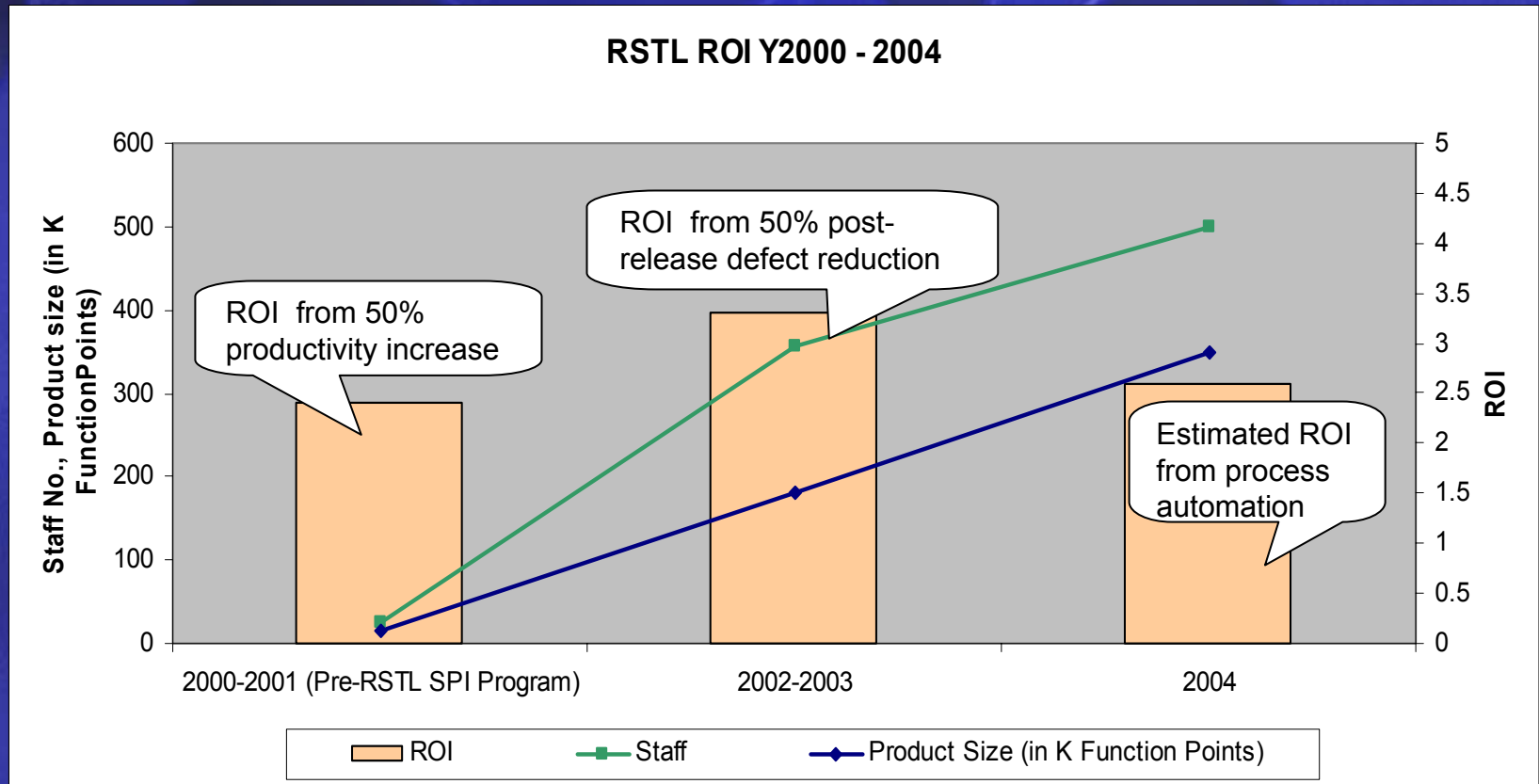# CMMI Calculator Scores

Level 4

Legend: Previous | Latest | Marginal | Qualified | Full

Organisational Process Performance — Previous: ~6.10, Latest: 8.00

Quantitative Project Management — Previous: ~5.60, Latest: 8.00

Reference lines: Full (8.00), Qualified (7.00), Marginal (6.00)
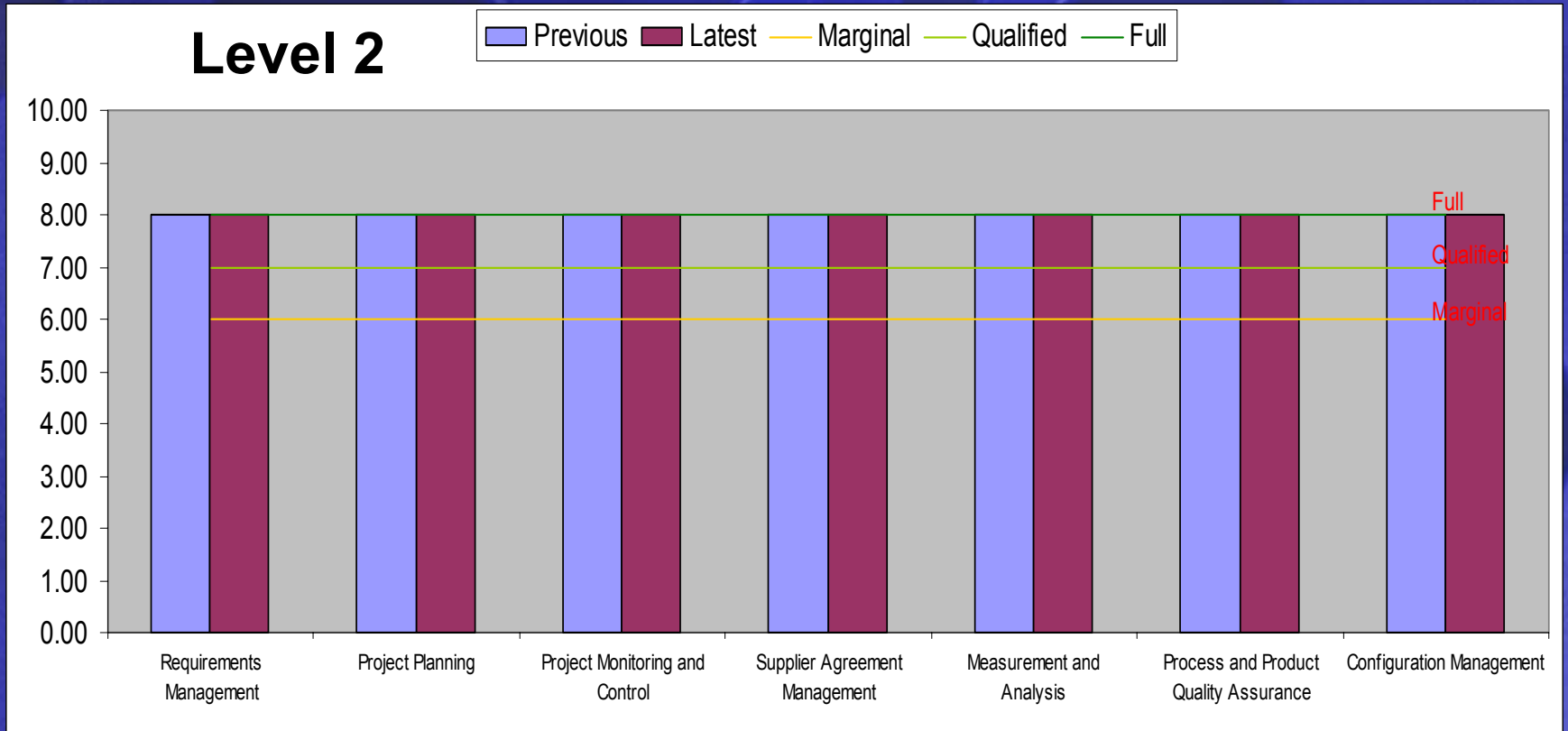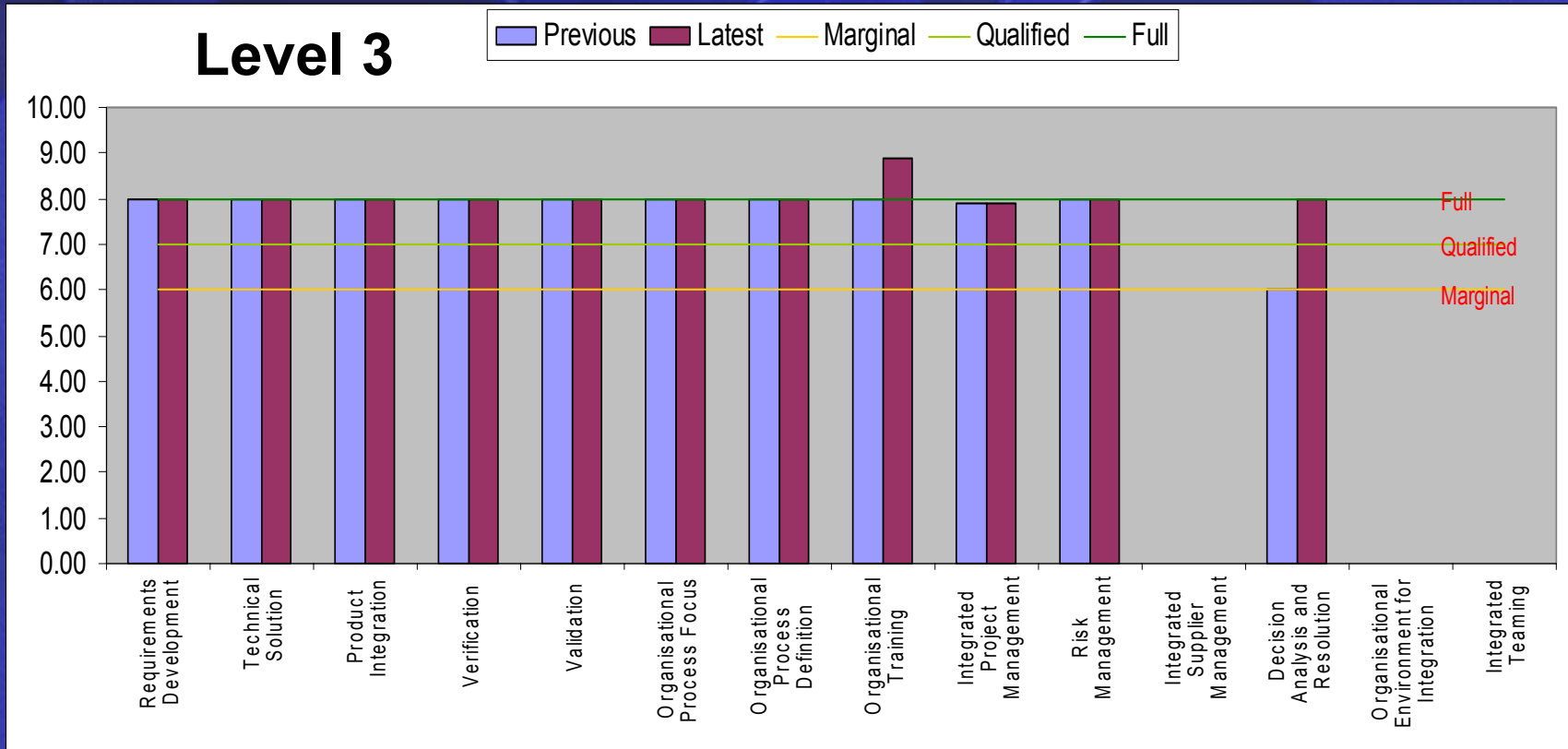
CMMI Calculator Scores

RSTL Improvement in Processes – Overall ROI (1)

RSTL ROI Y2000 - 2004

Note: Figures for 2004 are forecast values.

I Chart of Schedule Variance

Products transitioned in year 2002 have passed the transition sign-off for 4 months
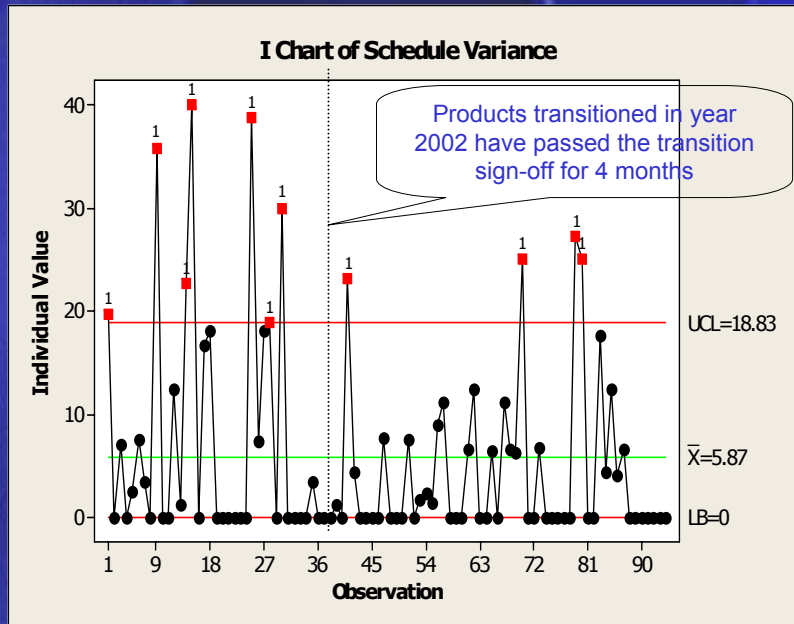
Background

- Schedule Variance during Jan 2002 - Apr 2003 is around 25% with 25 initial project observations.

Issue

- With the high growth rate of both Staff (from 100 to 350) and Supported Product (from 100 to 180 K FP), How to maintain and improve the schedule predictability?
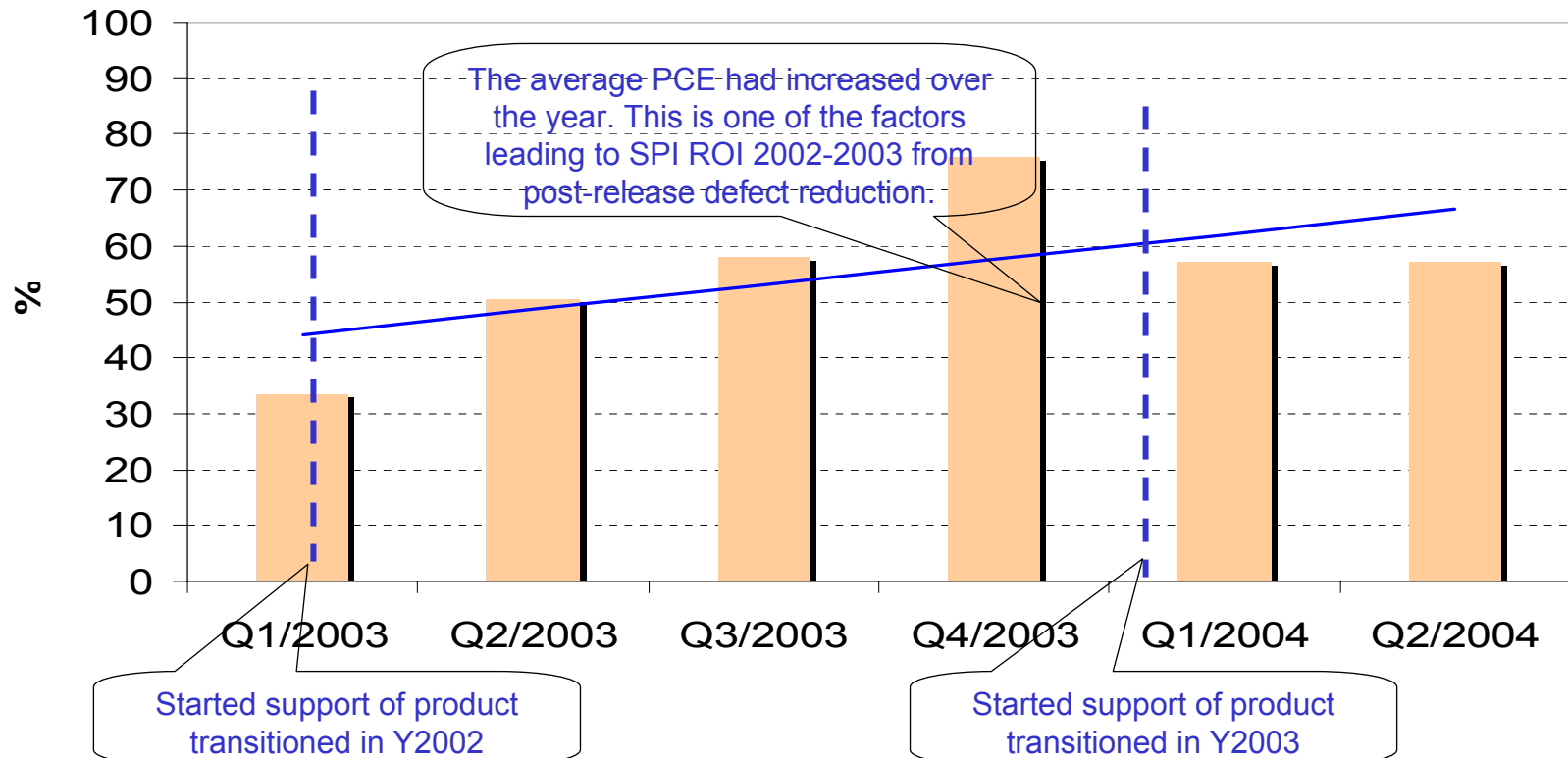
Action

- RSTL SPI Programme 2003 - Focused on process training and quantitative project management

Result

- RSTL has improved the capability of Schedule Variance to be 15% with100 project observations up to Apr 2004.

# RSTL Improvement in Processes – Phase Containment (3)

CMMI & Six Sigma

- CMMI asks for continuous process improvement (OPTIMISATION)
- Six Sigma provides it with
  - Well defined, disciplined methodology
    - Define, Measure, Analyse, Improve, Control
  - Industry wide
  - Can be applied to all parts of the business
  - Emphasis on results (ROI)
  - Breakthroughs v small incremental improvements
  - Measurement and Methodology

CMMI & Six Sigma
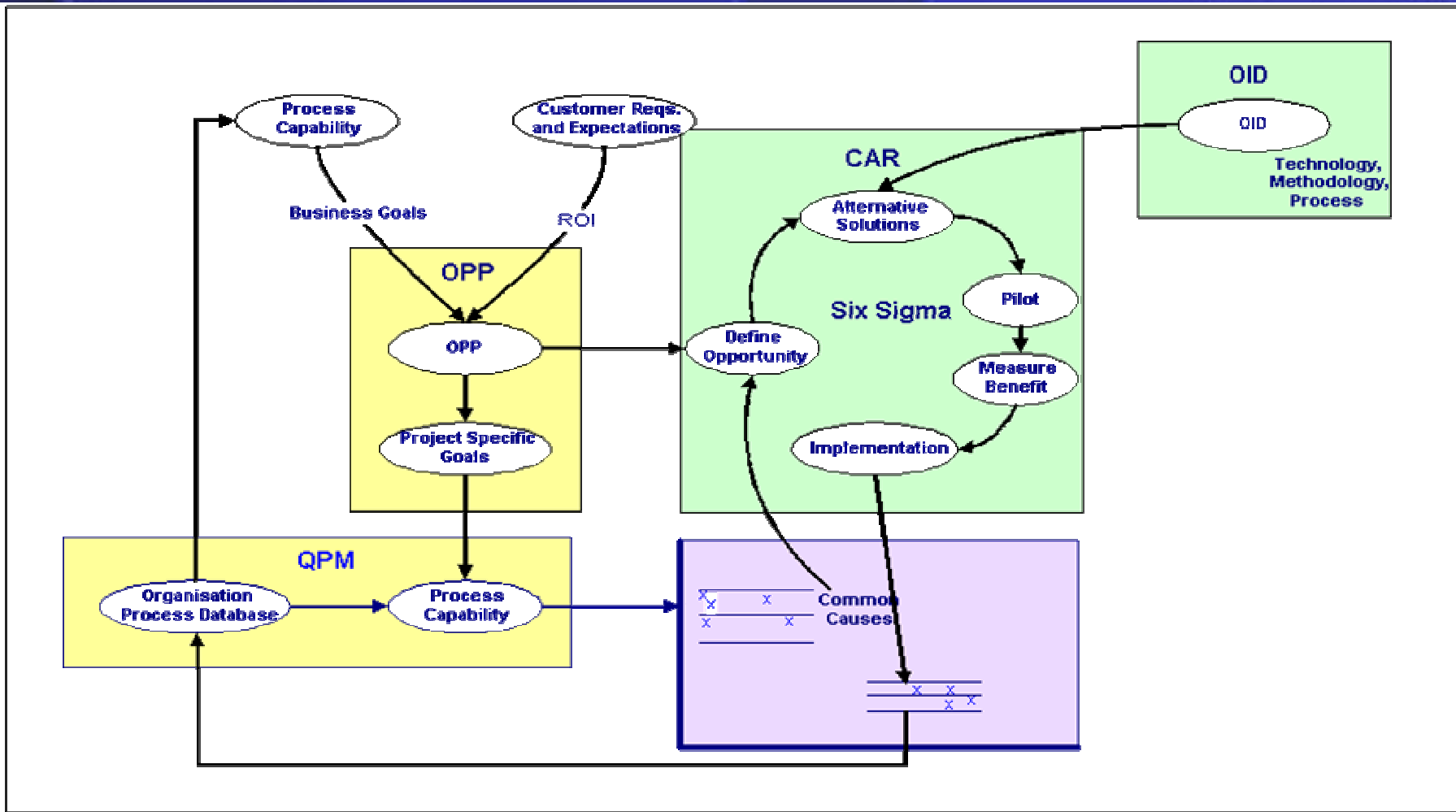
Progress

So Far
- One Master Black Belt
- Eleven Green Belts
- Established the first three Six Sigma Projects

Plans
- 2004 train all staff on Six Sigma methodology
- 2004 train one more Black Belt
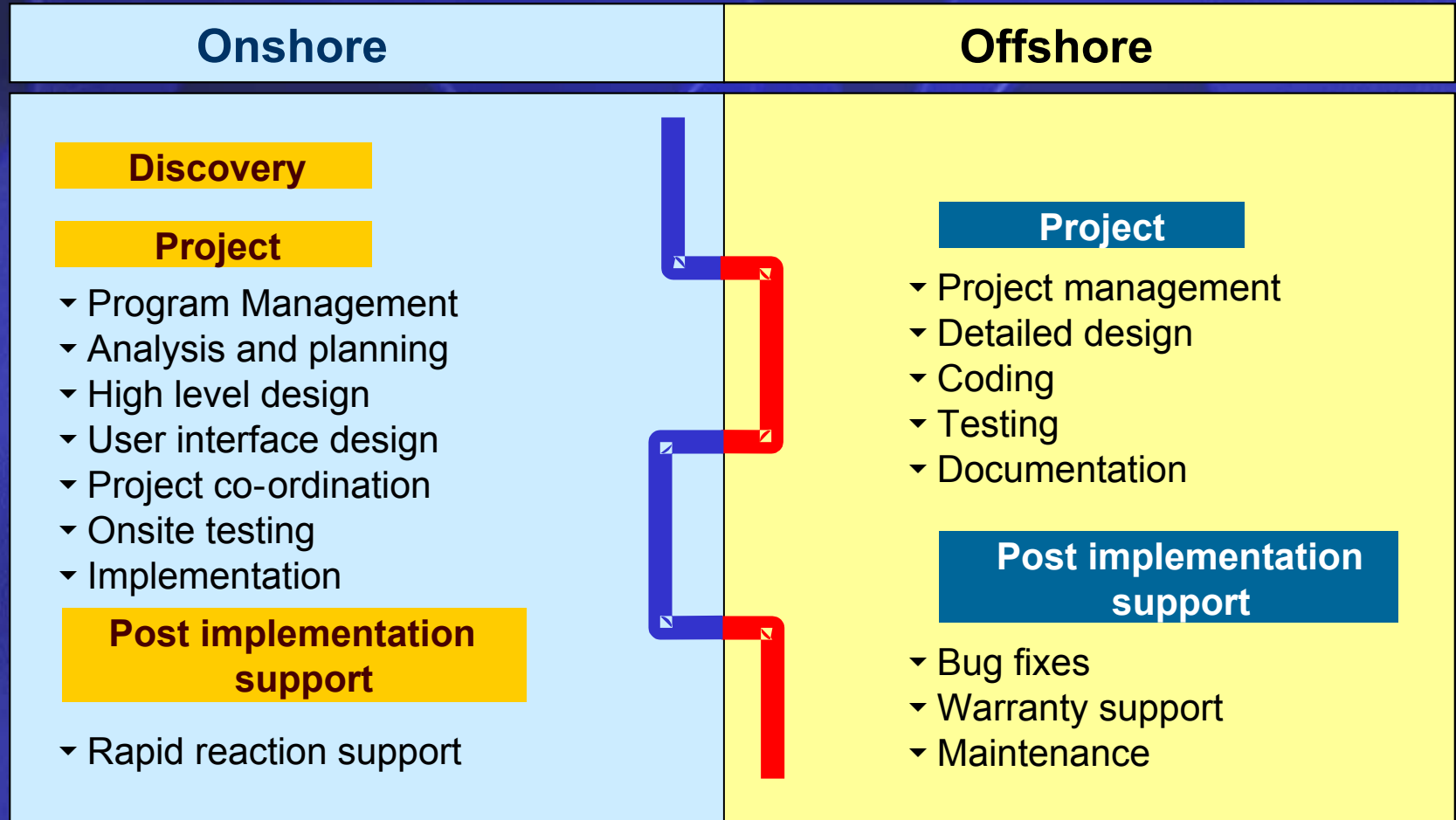- 2004 train seven more Green Belts

Offshore Development

Goal - Create an OFFSHORE development group to be
used for strategic software development in Reuters

Why

- High Productivity
- Low Cost
- Software Development Centeralised
- Maximize Reuse
- Operates at high maturity (Implies high quality)
- Greater control over core development

Onshore/Offshore Theory

Onshore	Offshore
Discovery	
Project	**Project**
▾ Program Management	▾ Project management
▾ Analysis and planning	▾ Detailed design
▾ High level design	▾ Coding
▾ User interface design	▾ Testing
▾ Project co-ordination	▾ Documentation
▾ Onsite testing	
▾ Implementation	**Post implementation support**
Post implementation support	
▾ Rapid reaction support	▾ Bug fixes
	▾ Warranty support
	▾ Maintenance

Real Life

- Lack of well defined requirements
- Used as just an extension of Onshore group
- Learning curve for some product support work to steep
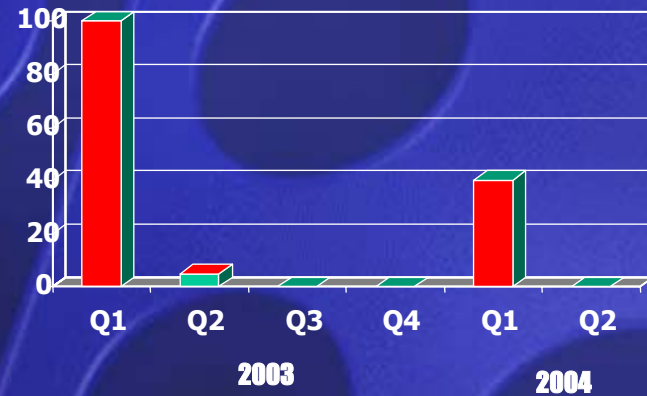- Culture
- Too many Offshore models

Offshore Models

- Extended Team
- Onshore Design/Offshore Production
- Functional Role Offshoring
- Transition
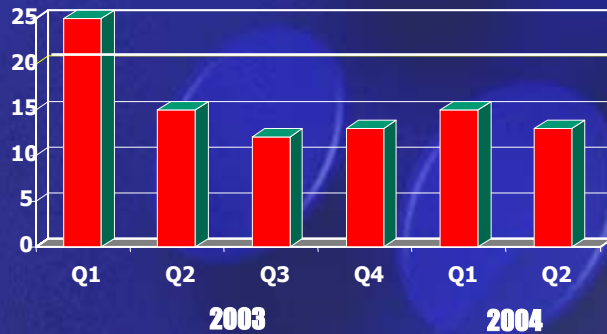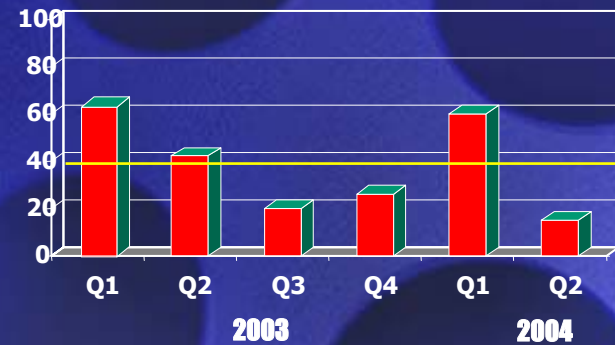- Offshore Development

Progress to date
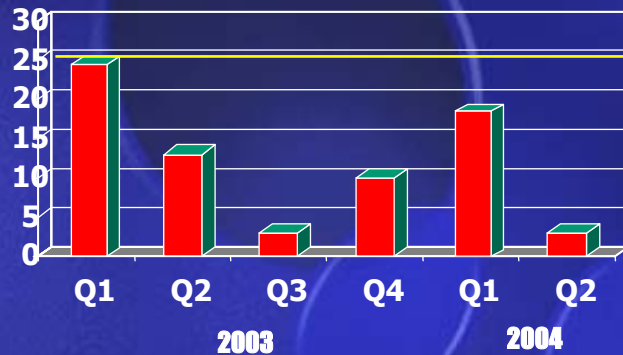
Future

The future

2004	2005

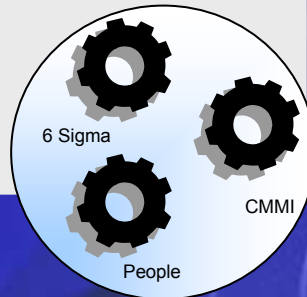**2004**

- Continue to hire good people (500)
- Continue to transition products to RSTL
- Build Offshore development process and capability
- Maintain Level 5
- Automate process/metrics
- Apply 6 Sigma methodology across RSTL
- Improvement Initiatives & methodologies wherever it makes sense

2005

- Develop and grow the knowledge of the staff (607)
- Create world class Offshore development centre
- Maintain Level 5
- Take an holistic approach to all Improvement Initiatives & methodologies
- Lead the application of CMMI, Six Sigma across all Reuters locations
- Create Integrated set of tools for Reuters

6 Sigma

CMMI

People

* Component Architecture Method

Thank you.
Question & Answers