

Return on Investment (ROI) from OID and CWI

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- 1. Organization Innovation and Deployment (OID) and Continuous Workforce Innovation (CWI) relationships**
- 2. Process improvement flow**
- 3. Criteria for acceptance**
- 4. Measuring ROI for process improvements**
- 5. Examples of ROI within Tata Consultancy Services (TCS)**
 - Delivery processes**
 - People processes**
- 6. Measuring ROI for process improvement in its entirety**
- 7. How an organization can motivate OID/CWI**
- 8. Who should be involved?**
- 9. The limits to possibilities with OID/CWI**

Key similarities

- Focus on continuously improving process activities
- Innovative and incremental viewpoints
- Organization orientation

Stronger focus in CWI (P-CMM®) on

- Establishing a framework for continuous improvement
- Empowering to enable continuous improvement of performance
- Eliciting opinions from all in the organization about working conditions and areas for improvement
- Setting quantified objectives for improvement
- Evaluating the effectiveness of improvements
- Most importantly CWI address improving workforce practices in addition to delivery process management practices as OID does

OID (CMMI®) provides more for

- Planning the Process and Managing Configuration

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Level 2 M&A in CMMI flows from and provides data for business goals and project processes which become input to organization processes

Level 3 provides the infrastructure with process groups and baseline process definitions

Level 4 provides more data about areas of possibility, which

- **Invites the minds of the associates to find opportunities**
- **Motivates management to ask questions for change**

CAR in CMMI at Level 5 is a direct source for OID

CCI in P-CMM at Level 5 is readily converted into CWI

OPA in P-CMM at Level 5 enables alignment of CWI to organization objectives

Does and organization need to wait to Level 5?

**If they do, they will lose opportunity
that is facilitated at Levels 2 and 3 and enabled at Level 4**



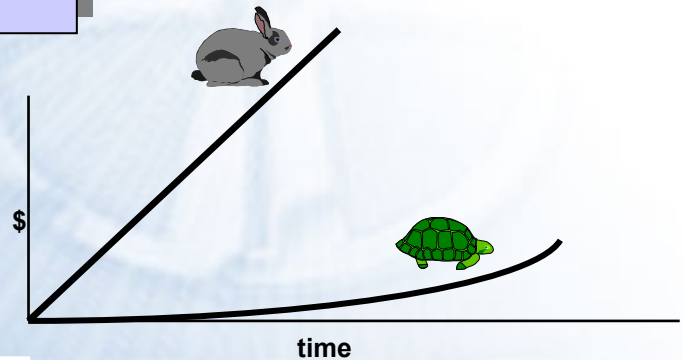
High impact Initiatives at Enterprise Level



Development Centre (DC) / Account / Relationship Level Initiatives



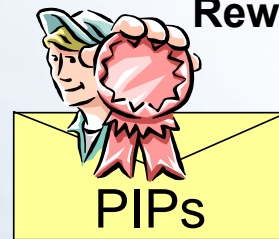
Individual and Project level Initiatives



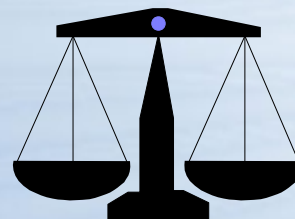
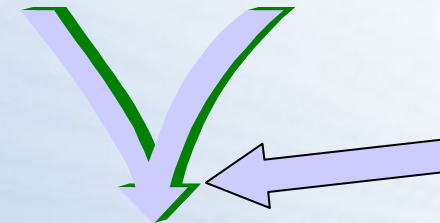
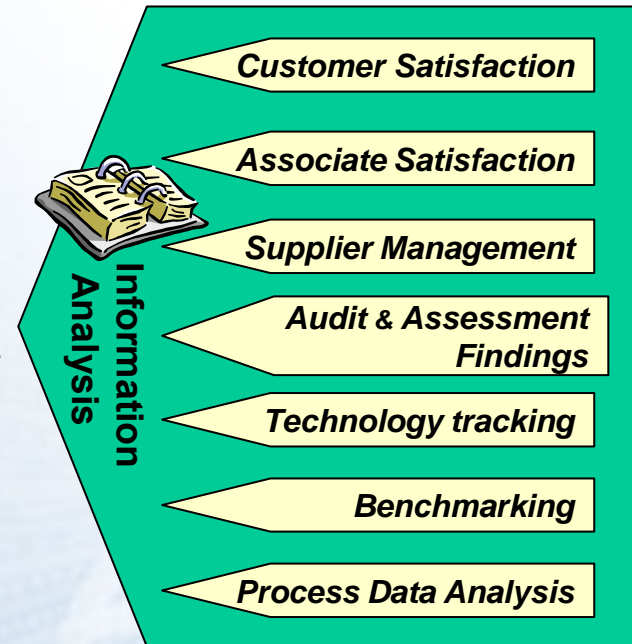
From incremental at the individual and project level to quantum leaps at Corporate



TCS
Strategy
Map



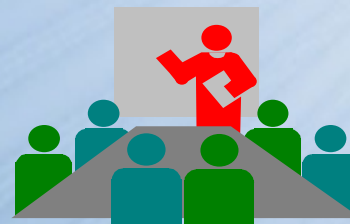
Rewards & Recognition Program



Piloting as appropriate



DEPLOYMENT:
Training, Facilitation,
Project Management Reviews
Audits, Process Owner Prime
Meetings, Deployment Task Force



Status and
ROI reports
to all
stakeholders



When does a Process Improvement Proposal (PIP) get accepted?

Criteria and associated weightage address

- Organizational goals and alignment with the TCS strategy map; e.g., productivity, cycle time, and quality
- Defined qualitative / quantitative benefits
- One time or recurring benefit
- Implementation complexity
- Applicability to all associates



When to pilot

New and unproven technology/process change

- If the impact on the process for such changes is high
- Span of change is wide across the organization
- Segmental; e.g., selected geographies may have key dependencies
- Temporal; e.g. for a specified period of time

When not to pilot

Obvious and clear value

Time is of the essence

The change is critically needed

When to deploy

- Deploy the change based on pilot results
 - Improvement is fit for purpose
 - Actual ROI > Projected ROI

Warning!
Long drawn pilots may sometimes
kill the initiative.
You cannot cross a chasm in steps.

- Direct deployment
 - Nothing existing that could be disrupted; e.g., for employee self service processes in Ultimatix such as claims, leave, travel, and Audit Processing Tool no pilot was done, since the processing was manual earlier



What should we like to find?

Improvements in:

- **Delivery processes**
 - Effort, schedule, and product quality within the project life cycle
 - Service levels in Production Support
 - Infrastructure costs, business process streamlining
- **People processes**
 - Results of Employee Satisfaction Surveys, Customer Satisfaction Index
 - Cycle time and effort
 - Administration, Staffing, Competency Development
- **ROI = ratio of savings / total costs for the improvement through deployment**
- **ROI calculation**
 - Over the length of time needed for the improvement to attain full maturity
 - One year view for savings
 - if the period is less than a year, ROI is extrapolated for a year based on actuals

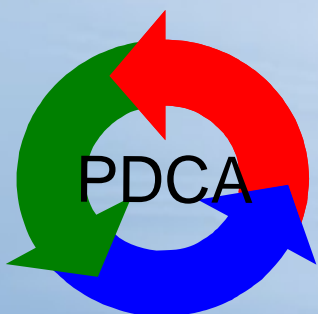
- When the savings or benefit are obvious, ROI may not be calculated, especially in people processes.
- For initiatives with customers, ROI is calculated per customer specified process.

ROI for Sample Improvements - Measured in person days

Improvement Reference No.	SPI Details	Projected Annualized Savings	Projected Annualized Costs	Projected Annualized ROI	Actual ROI
PIP-635	Scatter chart template	12.0	0.5	24.0	50.8
SPI-07	PMR Tool	185.5	21	8.8	9.4
SPI-08	Estimation template for Use case	16	4	4	5.3
PIP-356	Status Report template for PI projects	14	4.3	3.3	4.7
PIP-126	Kick-off meeting template	31	7	4.4	6
Overall ROI for SPI in one Centre					
Sum	Sum	3123.5	936.2	3.3	4.4

Individual / Project Level: PIPs

- Defect prevention and tools; e.g.,
 - Beyond Compare: to synchronize code configuration between sites
ROI 24.26 and savings of \$58K
 - Insure++: reduced rework effort through early detection of memory leaks
ROI 4.28 and savings of \$95K
 - Use case Estimation Guideline and template
ROI 5.33 and savings of \$1.6K
 - Conversion tools
ROI 8.2 and savings of \$314K
 - NCR average open days through a Six Sigma project
Reduced from 31 to 12 days



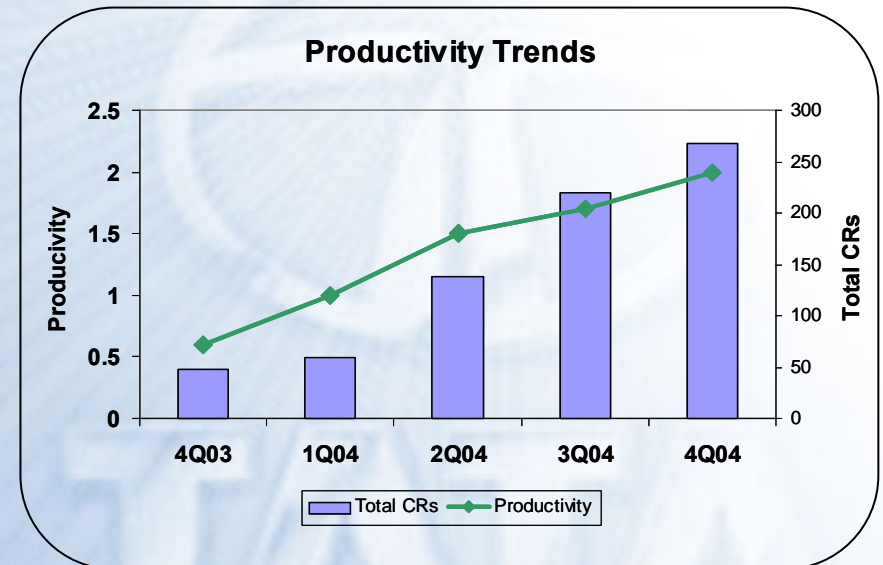
DC / Account / Relationship Level

Joint Program Management and Early Program Maturity

- Strong Defect Prevention practices
- Taking on increasing offshoring responsibilities for upstream processes and more complex assignments
- Quantified expertise levels that match customer expectations used for planning content delivery and gauging team maturity to take complex assignments
- Overall productivity improvement

Zero bad fixes for the past 1 year

1Q04 – 100% reviews done by customer vs 3Q04 – 15% reviews done by customer



DC / Account / Relationship Level

Customer Facing Proactive Improvement Programme

– Improvements such as

- » process streamlining and automation
- » performance tuning
- » use of TCS tools CONSULT for production support, REVINE for reverse engineering
- » domain and technology Centres of Excellence (COEs) for competency building

Savings of \$202K



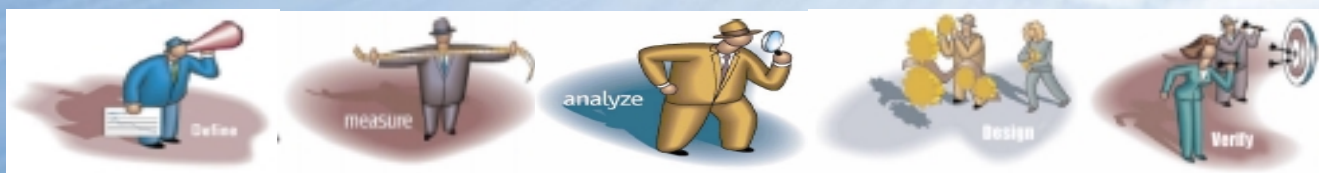
DC / Account / Relationship Level

Six Sigma

- ACFC (At the Customer For the Customer) projects kicked off and executed at the customer's location to bring improvements in a customer's process
- Defect reduction, cycle time reduction, cost reduction, cost avoidance, effort reduction,
- Reduction of wastes, rejects and recalls
- The Customer provides a sign off on the benefits upon realization of the same

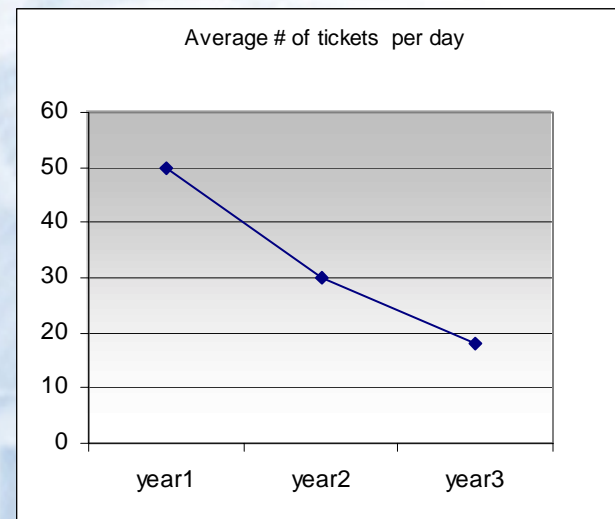
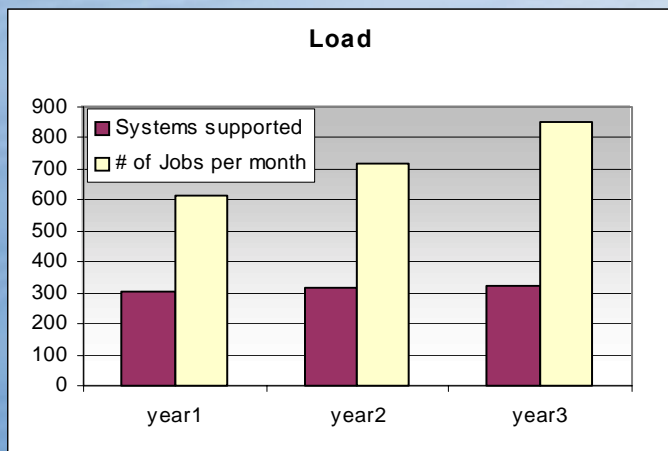
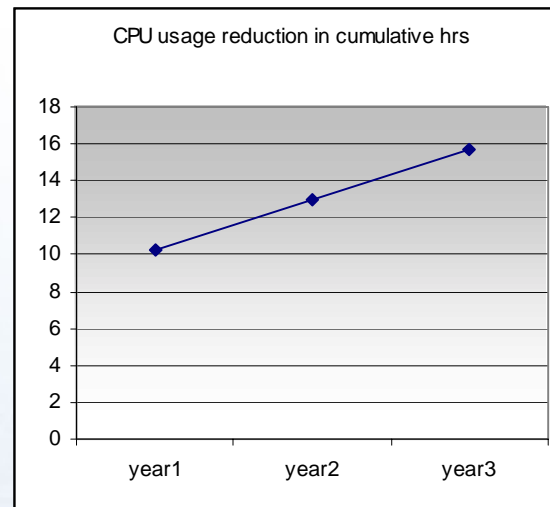


**\$17M annualized savings for the period 2002 - 2004
based on actuals in the deployment period**



Relationship Level for Production Support

Year	Year 1	Year 2	Year 3
Systems supported	306	314	322
# of jobs per month	>613350	>717000	>860000
Average # of tickets per day	50	30	18
Average ABEND reduction	At least 15% reduction over previous year	At least 15% reduction over Year 1	At least 15% reduction over Year 2
CPU usage reduction	10228 cumulative hours	12937 cumulative hours	15700 cumulative hours



Centre of Excellence (CoE @ DC Level)

Mechanisms

- Pre-Sales Support
- Technical Support
- Competency Building Support
- Reuse asset repository



Benefits

- Productivity enhancement, defect reduction, shorter cycle time for delivery
 - Asset repository

ROI 27.7 and savings of \$27K

- CoE website

ROI 5.21 and savings of \$3.9K

Relationship Level

Streamlining the SDLC

- Joint review and refinement of the testing process with the client

6% reduction in SDLC effort and 4% reduction in SDLC schedule

- An integrated process framework jointly developed with the client for product development, business acceptance testing, volumetric testing, and user documentation

- 6 % improvement in productivity
- Reduction in residual defects in production phase by nearly 50% of target
- 33% time to market reduction with improved methodology and refined SDLC

Enterprise Level

- Strategy investments in tools and R&D e.g.,
 - Mastercraft - support for large scale development through high levels of productivity from generated applications

1.2 to 2 times gain in productivity and savings of 115py and ROI of 2.59

- Revine - automating the manual process for use case documentation and impact analysis in re engineering projects

2 – 3 times productivity gain

- Conversion tools e.g., PLI/IMS to PLI/DB2

ROI 14.88 and saving of 2500 person days

Enterprise Level

- Process Focus

- Digitization / automation of Metrics Program

Savings of \$76K

- Web IPMS – tool for project management including Activity Based Costing, QA processes and metrics generation – based on TCS *iQMS* processes

ROI 8.36 and savings of \$190K

- Web PAL – tool for knowledge management

ROI 1.56 and savings of \$194K

- Uniform metrics dashboard

ROI 1.98 and savings of \$84K

Individual and Project Levels

- Online pay slip
- Globalnet for tracking associates' claims and allowances
- Connect to Europe – deputation manuals for all countries
- Revisions to overseas allowances
- Increased insurance coverage through new insurance provider



Where there was obvious
or real time value



DC Level

Where there was
obvious value

- Transportation portal to optimize transport costs
- EXOP (Exciting Opportunities) – initiative for effective allocation at DC level by establishing a digitized process for handling open positions with the involvement of associates.

ROI 48.69 and savings of \$102K



Benefits included:

- Increased currency of “Profiles” & Competency” in Ultimatix
- Improved planning of project allocation and release dates
- Increased interaction of associates with MATC

DC Level

Where there was obvious value

- Management of transport facilities by Voyagers committee
- Improvement to canteen facilities through Canteen committee
- Fun @ Work – Forum for associates to host events together
- Toastmasters Club
- Floor Meetings – GL of a particular team, in association with a HR associates addresses the whole team, once a month

Employee Satisfaction Survey Index improvement (2003 – 04)

- Communication has moved up from .67 to .71
- Involvement and Flexibility and has moved up from .73 to .75
- Work environment has moved up from .73 to .75

Relationship Level

- Six sigma improvement projects



- Telecommunication expenses

Reduction by 22%
saved \$15.8K per month

- Outstanding billings

Reduction of cycle time by 48%

- Empowering associates through Cross Functional Teams (CFTs) to execute processes and improve them
 - Sample charter
 - » Help all the members of our relationship achieve their work objectives by facilitating services and guiding with empathy
 - » Add value to the organization by deploying repeatable processes and creating reusable assets
 - » Facilitate team building, empowerment, and grooming second-tier leadership

CFT	DESCRIPTION	BENEFITS
Training CFT	<ul style="list-style-type: none"> • Tracks the Individual Learning Plan (ILP) and ensure attendance • Updates training group with internal training hours • Weekly reminder to clock time against training 	<ul style="list-style-type: none"> • Training hours has increased • Better compliance to ILP training
Infrastructure CFT	<ul style="list-style-type: none"> • PC allocations • Software (S/W) Procurement • Link Management 	<ul style="list-style-type: none"> • Maximum usage of resource • Procurement of S/W licenses faster • Link down time has reduced • Resolution on virus attacks faster • Shifting made easy
HR CFT	<ul style="list-style-type: none"> • Follow-up of confirmations / appraisals • Providing panelists during recruitment 	<ul style="list-style-type: none"> • Provided maximum panelists for recruitment from the relationship
Technology CFT	<ul style="list-style-type: none"> • Provide knowledge on latest technology • Maintenance of virtual library on skill set 	<ul style="list-style-type: none"> • Cycle time for training reduced • Cross training people on multiple technologies to reduce dependence on Subject Matter Experts (SMEs)

Enterprise level

- Efficient people management of a global, mobile, workforce spread across distributed project teams; e.g.,
 - Performance management using SPEED tool for remotely located supervisors and appraisees who have been moving across projects across the globe

Reduced appraisal cycle time from 1 month to 1 week at DC level

- Employee Satisfaction Survey (ESS) administration
- Administrative functions; e.g., claims, travel
- Toll free HR helpline
 - Expedite query resolution time
 - Data on problem areas and types available, allowing for further analysis and action by HR / management

Benefits include:

- Guaranteeing accuracy, standardization, and timeliness to associates
- Making certain that management is consistently updated about exceptions encountered in policies and procedures by associates

Enterprise level

- Empowerment
 - Propel and PEEP for career development, group problem solving and mentoring
 - Improving people management processes through cross functional teams; e.g., digitization priorities, improved communication mechanisms



- E learning

ROI 1.45 and savings \$1.04M

- Enterprise Management Program – a world class workplace initiative; e.g., Global Help Desk

- Support Engineer to Employee ratio reduce from 1.94% to 1.34% for a large and complex setup like TCS
- Eliminated the need for 174 additional engineers required to support 29,000 users



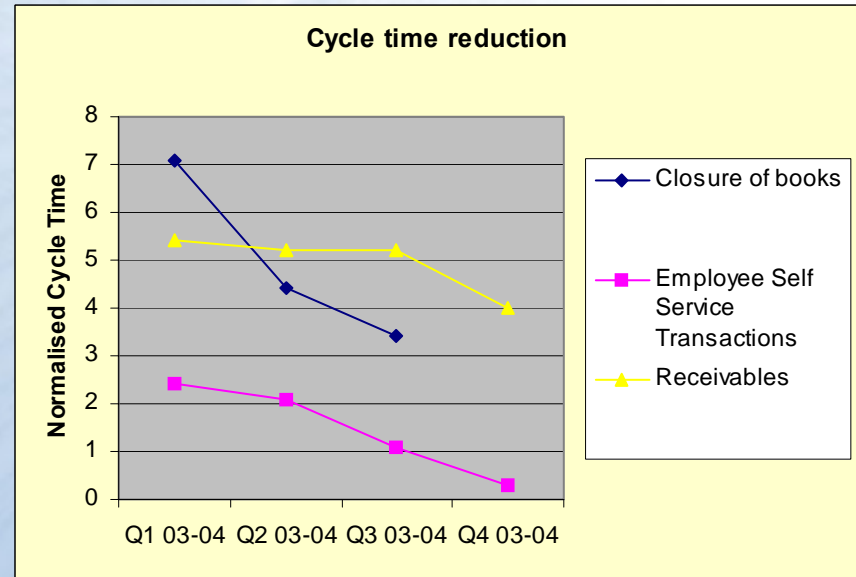
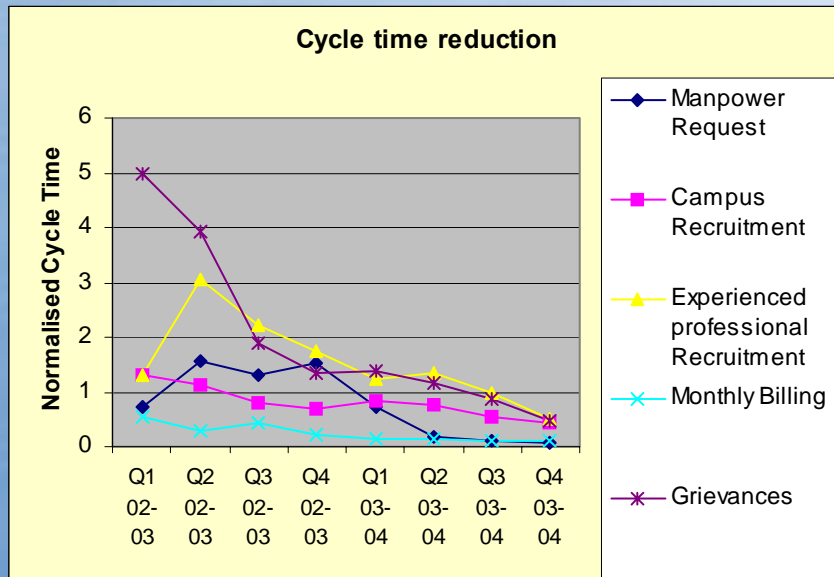
- **Across TCS**

- ROI from individual and project process improvement across all DCs in TCS

ROI of 2.65 and savings of \$4.6M and in 2004

- Relationship level improvements not aggregated at TCS level
- Corporate initiatives

Reduction in cycle time through digitization and associated new processes

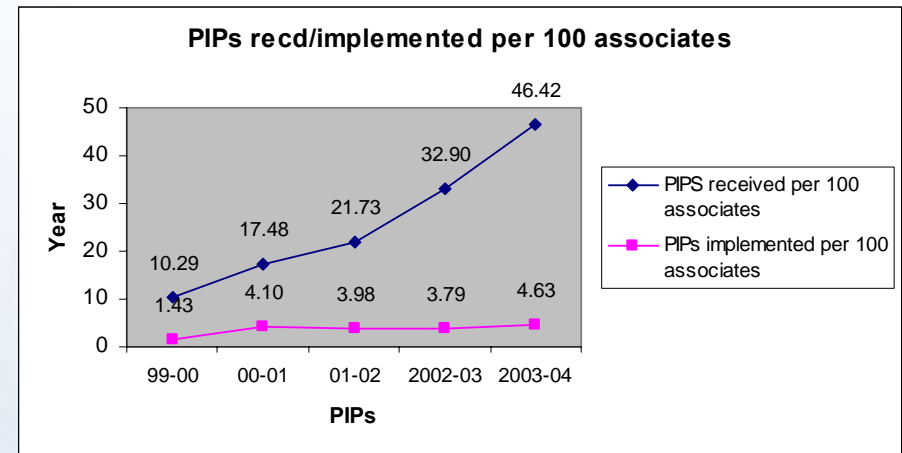


- **Communicate to all the Business Need and relationships; e.g.,**
 - Retain clients
 - Growth in sales
 - Reduce costs to clients
 - Increase operational efficiency
 - Become more competitive
- **Align with customer/relationship goals; e.g.,**
 - Six Sigma, cost savings, risk sharing
- **Make continuous improvement a part of business strategy and cascade it to associates through goals set at organization level; e.g.,**
 - Number of improvements suggested from associates
 - Number of approved and deployed suggestions
 - ROI from improvements
- **Acknowledge that every person in the organization has at least one idea for change every day — keep this acknowledgement focused so all understand and appreciate its value**
- **Reward contributors**

Look everywhere for improvements



PIP trends



Multiple mechanisms for gathering suggestions

PIPs

ESS

CFTs handling workforce practices, e.g. transport, canteen..

Process Improvements

Grievance Handling, PEEP, PROPEL

User groups giving requirements to Ultimatrix (including PAL and IPMS CCBs)

Action proposed from DATA analysis of process performance, comparative performance

CSS and Customer feedback

After an organization achieves a Level 5 the model cannot guide advancing continuous improvements

The organization must do all it can to motivate change input from all members

The organization must value and fund the handling of all change inputs, some of which will be not selected for change, but some of which offer the possibilities of breakthrough

Mature relationships benefit more by OID and CWI; e.g.,

- **Working in partnership mode with aligned goals for the organization and customer**
 - **Both parties working for end user benefits; e.g., Six Sigma**
- **Willing to innovate and manage associated risks with change**
- **Understand the value of measuring change**
 - **All organizations regardless of level benefit by starting and measuring earlier than Level 5**
- **As external innovation never ceases, keep a keen eye to external changes**
- **OID and CWI pay for themselves; they have an significant ROI**

There are no limits except those chosen!

- **All those who have contributed to improvement of TCS processes and our customers' processes**
 - **TCS Management, DCs, Relationships, Associates**
 - **Our customers**

Q & A

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Thank You