Implementing a Measurement Framework to Drive Value

Improve the "Business of IT" by using a measurement framework and metrics that matter most
Your instructor

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The problem?

• Not sure what to measure
• Measure too many things already
• Business/IT goals not measured
• Priorities focus on noise vs. what's important
• Customer complaints drive improvements
• Efficiency, effectiveness, quality not well understood.
The solution

- Metrics are important to management. What's not measured cannot be managed. But what should be measured, why and how?
- Improve the "Business of IT" by using a measurement framework and metrics that matter most.
Learning objectives

• Metrics validate your IT strategy and vision; provide direction with targets and metrics; justify changes with a means to gauge value-realized; signal when to intervene with corrective actions.

• Hear case studies and examples that help you improve alignment, meet compliance and drive service excellence.

• Learn the secrets of how measurement frameworks works and take away a roadmap with actionable steps.
What are metrics about?

A “metric” is just another term for measure. Metrics are an important part of the management system that steers and controls IT in the desired direction to optimize value.

**Align business/IT objectives**
- Accounting of IT processes & deliverables
- Inform stakeholders
- Understand issues

**Achieve compliance**
- Comply with IT Operations Strategy
- Meet ISO20000, CobiT, other
- Identify Critical success factors
- Minimize interruptions

**Operational excellence**
- Measure, control, manage, maximize, value creation
Measurement Framework

A measurement framework helps to validate, direct, justify and intervene when necessary to meet your goals and objectives.

**Goal:**
- Provide a measurement framework to align IT with the business objectives and create value through continual improvements.

**Objectives:**
- To align IT with business objectives
- To help maintain compliance requirements for business operations
- To drive operational efficiencies, effectiveness and quality

Source: Implementing Metrics for ITSM
Measurement lifecycle

Provides a basis for management decisions and continual improvement.

Identify:
- Vision
- Strategy
- Tactical Goals
- Operational Goals

1. Define what you should measure

2. Define what you can measure

3. Gather the data
   - Who?
   - How?
   - What?
   - Integrity of the data?

4. Process the data
   - Frequency?
   - Format?
   - System?
   - Accuracy?

5. Analyze the data
   - Relations?
   - Trends?
   - Targets met?
   - Causes?
   - Corrective action?

6. Present and use the information, assessment summary, action plans etc.

7. Implement corrective action

Source: ITIL® Continual Service Improvement
Goal alignment

Metrics are aligned to support goal/objectives to ensure prioritization of improvements

Theme 1  Theme 2  Theme n.

Vision/Mission → Goals → KGI → Objectives → CSF → KPI → Benefits → KBI → Expected Outcomes → Verification

Ask:
- “What actions are required?”
- “How will actions be verified?”

Source: ITIL® Continual Service Improvement
What to measure

Key Goal Indicators
- Agile
- Optimized

Critical Success Factors
- Available
- Responsive
- Secure

Efficient
- Effective
- Quality
- Progress
- Utilization
- Compliant

Fact Metrics
- FCR Rate
- MTTR
- Failed RFC
- Call abandon
- Cycle time
- MTBI
- Cost/call
- Cus. Sat.

Key Performance Indicators
- RFCs
- FTEs
- Cls
- Incidents
- Problems
- Breaches
- MACs
- Lines of code
- Wait time
- Downtime

Source: Implementing Metrics for ITSM

Framework links strategic objectives from the top with measurement/metrics from the bottom.
### Example: Service Goals

“What actions are required to improve service levels?” “How will actions be verified?”

- Increased productivity & satisfaction

<table>
<thead>
<tr>
<th>Bus Goal</th>
<th>IT Goal</th>
<th>KGI</th>
<th>Benefit</th>
<th>IT Objective</th>
<th>CSF</th>
<th>KPIs</th>
<th>KPMs</th>
<th>KFM s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve customer orientation and service (service levels).</td>
<td></td>
<td></td>
<td></td>
<td>Ensure the satisfaction of end users with service offerings and service levels.</td>
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<td></td>
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<td>All IT service level objective targets are met</td>
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<td>Higher User productivity &amp; satisfaction (hidden cost &amp; customer satisfaction)</td>
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<td>Meet Email service level objectives</td>
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<td>Email service availability - end to end</td>
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<td>Percentage Network availability during agreed service time</td>
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<td>MTTR (Mean Time To Repair/Restore &quot;downtime&quot;)</td>
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<td>Percentage Exchange Server availability during agreed service time</td>
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<td>Percentage Replication Server availability during agreed service time</td>
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<td>MTBSI (Mean Time Between System Incidents)</td>
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<td>MTBSI (Mean Time Between System Incidents) - Days</td>
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<td>Percentage improvement Exchange Server reliability</td>
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<td>% change - MTBSI (Mean Time Between System Incidents)</td>
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</tbody>
</table>

Source: Implementing Metrics for ITSM
Case Study 1 - Bus/IT Alignment

Getting into “The Zone” of high value service delivery.
Background

• Problem
  – Perception of poor service quality
  – Belief that applications were unreliable

• Approach
  – Devise measurement framework to promote service excellence
  – Use existing tools where possible
  – Multi-level management dashboards/scorecards
What’s important?
Stakeholder “perspectives”

- Proposed perspectives or stakeholder viewpoints that need measurements with themes:
  - Customer view – value for money (i.e. business impact, satisfaction themes, cost)
  - Internal IT view – internal IT performance (i.e. service level achievements, effectiveness and performance themes)
  - Financial – cost effectiveness themes (i.e. efficiency or unit costs)

Legend:
- KGI – Key goal indicators
- CSF – Critical success factors
- KPI – Key performance indicators
- KPM – Key performance metrics
- KFM – Key fact metrics

Source: Micromation Inc.
The effect IT Service has on users or customers. For example, measuring productivity loss, overtime hours, backlogs, lost revenues, SLA breaches etc.

Quality of services delivered to customers or users. i.e. free from defects.
User’s experience of outages and performance i.e. frequency, duration, scope.

Number, type or level of service delivered to Users IT Services. For example, issues resolution, service availability, performance throughput, system reliability.

IT Services use their resources, often expressed as a cost per unit of service or the volume of output per staff member. For example, the average cost per User per year, average cost per transaction.

Four measurement themes were recommended to achieve balance for high value service delivery “The Zone”.

Source: Micromation Inc.
## Themes & metrics

<table>
<thead>
<tr>
<th>Theme</th>
<th>General Examples</th>
<th>Specific Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost effectiveness measures</strong></td>
<td>1. Cost per X 2. Time per X 3. Resources per X 4. Transactions per X 5. Users per X</td>
<td>1. Cost % per portfolio</td>
</tr>
</tbody>
</table>
Determine the metrics hierarchy to be reported on.

Source: Micromation Inc.
Zone dashboard

Service 1 - Dashboard

Quick Launch

Timeframe: Daily
Report Period: 31-Jul-2010

Views:
- Dashboard
- Service Map
- Cause & Effect
- Customer Impact
- Service Level
- User Sat/Exp
- Efficiency
- RYG Status
- Trending
- Alerts
- Volumetrics
- Initiatives
- Legends
- Changes

MDB
- Home

Enterprise:
- XYZ

Portfolios:
- AB
- CD
- EF
- GH

Services:
- Zone dashboard

Customer Perspective
- SC2 IDX4001 Customer Impact
- SC4 IDX4003 User Sat/Exp
- SC3 IDX4002 Service Level

IT
- SC5 Efficiency

Financial

Customer Sat/Experience Indicators
- SC10 IDX5003 Satisfaction
- SC11 IDX5004 Experience

Service Level Index Indicators
- SC7 IDX5001 SL Objectives
- SC8 IDX5002 Protect Service

In the Zone
- SC1 IDX3001 In the Zone
- SC2 IDX4001 Customer Impact
- SC4 IDX4003 User Sat/Exp
- SC3 IDX4002 Service Level

Zone Perspective Indicators
- SC5 Efficiency

Trend

Zone dashboard
setSMF

myKPI Designer © Micromation 2010
Customer impact

Service 1 - Customer Impact

Quick Launch

Timeframe: Monthly
Report Period: 31-Jul-2010

Views:
Dashboard
Service Map
Cause & Effect
Customer Impact
Service Level
User Sat/Exp
Efficiency
RYG Status
Trending
Alerts
Volumetrics
Initiatives
Legends
Changes

In the Zone

SC1 IDX3001 Customer Impact

T | B | other 2.7

Sun Mon Tue Wed Thu Fri Sat
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

09-Aug 09-Sep 09-Oct 09-Nov 09-Dec 10-Jan 10-Feb 10-Mar 10-Apr 10-May 10-Jun 10-Jul
Service levels

Service 1 - Service Levels

Quick Launch

Timeframe: Daily
Report Period: 31-Jul-2010

Views:
- Dashboard
- Service Map
- Cause & Effect
- Customer Impact
- Service Level
- User Sat/Exp
- Efficiency
- RGF Status
- Trending
- Alerts
- Volumetrics
- Initiatives
- Legends
- Changes

MDB
- Home

Enterprise:
- XYZ

Portfolios:
- AB
- CD
- EF
- GH

Services:
- Hist

Availability Indicators - Uptime/MTBF

- SC1 PD011 #Major Incidents
  - S less
  - S more

- SC2 PD014 Availability(IT)
  - W less
  - W more

- SC3 PD080 Unavailable(Srv)
  - S less
  - S more

- SC4 PD076 Unavailable(Apps)
  - S less
  - S more
  - 33.3

Performance Indicators - Response Time

- SC5 PD088 Underperform(Srv)
  - B less
  - B more

- SC6 PD084 Underperform(Apps)
  - T less
  - T more

Maintainability Indicators - Duration of Failure/MTTR/Down

- SC7 PD001 %Major Incidents
  - S more
  - 100.0

- SC8 PD044 MTTR

Reliability Indicators - Frequency of Failure/MTBSI

- SC9 PD006 MTBSI
  - S more
  - 1.0

- SC10 PD051 Major Incidents
  - S less
  - 3.0

Manage Changes

- SC12 DX6005 Protect Service

Connecting service management professionals
Service 1 - Service Map

Quick Launch

Timeframe: Daily
Report Period: 31-Jul-2010

Views:
- Dashboard
- Service Map
- Cause & Effect
- Customer Impact
- Service Level
- User Sat/Exp
- Efficiency
- RYG Status
- Trending
- Alerts
- Volumetrics
- Initiatives
- Legends
- Changes

MDB
- Home

Enterprise: XYZ

Portfolios:
- AB
- CD
- EF
- GH

Service map
Service 1 - User Satisfaction/Experience

Quick Launch

Timeframe: Daily
Report Period: 31-Jul-2010

Views:
- Dashboard
- Service Map
- Cause & Effect
- Customer Impact
- Service Level
- User Sat/Exp
- Efficiency
- RYG Status
- Trending
- Alerts
- Volumetrics
- Initiatives
- Legends
- Changes

MDB
- Home

Enterprise:
- XYZ

Portfolios:
- AB
- CD
- EF
- GH

Services:

User Satisfaction Survey

User's/Client's Experience of Availability

User's/Client's Experience of Performance
Cost effectiveness

Service 1 - Efficiency

Quick Launch

Timeframe: Daily
Report Period: 31-Jul-2010

Views:
Dashboard
Service Map
Cause & Effect
Customer Impact
Service Level
User Sat/Exp
Efficiency
RYG Status
Trending
Alerts
Volumetrics
Initiatives
Legends
Changes

Cost per

Time per

Resources per

Transactions per
Outcome

• Services rolled out by portfolios
• Leveraged existing application performance monitoring tool investments
• Multi-dimensional views provided transparency for complex service delivery chains
• Problems identified and resolved efficiently/effectively minimizing business impact and maximizing customer satisfaction
Case Study 2 - Bus/IT Compliance

Efficient, effective and quality processes.
Background

• Problem
  – Over SOXified
  – Change management process resource intensive
  – Strict enforcement to meet corporate compliance

• Approach
  – Mapped out process
  – Measured efficiency, effectiveness, quality and bottle necks
Change management metrics

- CM001 % Unsuccessful - failed changes
- CM002 % Rejected RFCs - of total
- CM003x # Unauthorized changes made
- CM004 Change backlog
- CM005x Outage incident count
- CM006x # Failed changes w/o back-out plan
- CM007 % Successful - changes on time
- CM008 % Changes causing issues (incidents)
- CM009x # CAB items not actioned on time
- CM010 # Emergency (Latent) changes
- CM011x # Changes not delivering exp. results
- CM012x CM Customer Satisfaction
- CM013 Avg. Hrs. per Change
- CM014 Avg. Hrs. per Standard Change
- CM015 Avg. Hrs. per Normal Change
- CM016 Avg. Hrs. per Emergency (Latent) Change
- CM017 Avg. cycle time - all changes (days)
- CM018 Avg. cycle time - standard (days)
- CM019 Avg. cycle time - normal (days)
- CM020 Avg. cycle time - emergency/latent (days)
- CM021 # Logged RFCs
- CM022 # Rejected RFCs - Initial filtering
- CM023 # Accepted RFCs
- CM024 # Failed or timed-out changes
- CM025 # Successful - closed changes
- CM026 # Standard changes accepted
- CM027 # Normal changes accepted
- CM028 # Post Reviewed changes
- CM029 # Rejected RFCs - insufficient change data
- CM030 # Changes - causing issues (incidents)
- CM031 # Successful - closed on time
- CM032 # Successful - closed but late
- CM033x Change labour hours - all changes
- CM034x Change labour hours - standard
- CM035x Change labour hours - normal
- CM036x Change labour hours - emergency (Latent)
- CM037 % Standard changes
- CM038x CM maturity level
- CM039 # Completed RFCs
- CM040 % Minor changes
- CM041 % Major changes
- CM042 % Significant changes
- CM043 RFCs logged as % of baseline
- CM044x RFC approvals as % of baseline
Dashboards

Dashboards helped align IT with the business goals.

![Change Management Dashboard]

- **Performance Indicators**
  - Efficiency vs. Effectiveness

- **Key Goal Indicators**
  - **Activity Goals**
    - Repeatability Process
  - **Process Goals**
    - Protect Service
  - **IT Goals**
    - Quick & Accurate

- **Benefit Indicators**
  - Benefit 1: Cost Avoidance
  - Benefit 2: Productivity
  - Benefit 3: Agility

- **Improvement Initiatives**
  - Efficient & Effective
Scorecards made it easier to concentrate on what matters.

## Change Management – Performance Scorecards

### Quality

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Description</th>
<th>Maturity Level</th>
<th>Measure that indicates quality process</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM/010</td>
<td>Change incident count</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>CM/011</td>
<td>% Changes needing investigation</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>CM/012</td>
<td>% Change for delivering exp. results</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>CM/013</td>
<td>CM Customer Satisfaction</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

### Efficiency

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Description</th>
<th>Efficiency</th>
<th>Measure that indicates efficiency process</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM/020</td>
<td>Avg. cycle time - standard</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>CM/021</td>
<td>Avg. cycle time - basic</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>CM/022</td>
<td>Avg. cycle time - emergency</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>CM/023</td>
<td>Change labour hours - standard</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>CM/024</td>
<td>Change labour hours - basic</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>CM/025</td>
<td>Change labour hours - emergency</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>CM/026</td>
<td>Change backlog</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>CM/027</td>
<td>CAD items not actioned on time</td>
<td>15</td>
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</tbody>
</table>

### Effectiveness

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Description</th>
<th>Effectiveness</th>
<th>Measure that indicates effectiveness process</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM/030</td>
<td>% Unsuccessful – failed changes</td>
<td>45%</td>
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<tr>
<td>CM/031</td>
<td>% Fails changes which back-out plan</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>CM/032</td>
<td>% Unauthorized change made</td>
<td>15</td>
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<tr>
<td>CM/033</td>
<td>% Changes causing incidents</td>
<td>45%</td>
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<tr>
<td>CM/034</td>
<td>% Changes not delivering exp. results</td>
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</table>

### Maturity

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Description</th>
<th>Maturity Level</th>
<th>Measure that indicates the current process maturity level</th>
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<tr>
<td>CM/001</td>
<td>CM Maturity Level</td>
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### Initiatives

<table>
<thead>
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<th>Index Name</th>
<th>Description</th>
<th>Initiatives in Progress</th>
<th>Measure that indicates the progress of improvement</th>
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### Benefits

<table>
<thead>
<tr>
<th>Index Name</th>
<th>Description</th>
<th>Anticipated Benefits</th>
<th>Measure that indicates the anticipated benefit</th>
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</thead>
<tbody>
<tr>
<td>CM/040</td>
<td>% Successful – changes on time</td>
<td>45%</td>
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<tr>
<td>CM/041</td>
<td>% of releases on time</td>
<td>45%</td>
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<tr>
<td>CM/042</td>
<td>CM Customer Satisfaction</td>
<td>9</td>
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</table>
Process map scorecards provided the instrumentation necessary to control the process.
Root cause analysis tools made it easier to spot danger in time to correct it.
Outcomes

• Observations
  – All change approvals treated equal – overkill
  – Too much effort on low priority changes that had no impact on compliance

• Improvements
  – Preapproved changes stream
  – Prioritization schemes aligned for compliance
  – Efficiency and effectiveness improved with focus on high risk changes
  – Lowered overtime costs and stress on organization
  – Compliance requirements still met
## Roadmap/ Activities

Each phase is comprised of four main activities:

<table>
<thead>
<tr>
<th>Plan</th>
<th>Design</th>
<th>Implement</th>
<th>Optimize</th>
</tr>
</thead>
</table>
| • Kickoff meeting & orientation  
• Vision/goals/objectives  
• Review what exists  
• Assign roles and responsibilities  
• Resourcing requirements  
• Plan the approach & roadmap  
• Initiate communications plan  
• Definition of themes/perspectives  
• Define what should be measured  
• Assess what can be measured | • Administration process, metrics DB  
• Reporting process, dashboards, scorecards, reports  
• Collection & monitoring process  
• Analysis process  
• Tuning process  
• Improvement process  
• Assess automation & reporting tool options | • Gather the data  
• Process the data  
• Analyze the data  
• Present and use the information  
• Implement corrective actions  
• Transfer control to operational staff | • Review/assess  
• Measurement program goals, objectives are being met  
• Completeness, accuracy, validity, that is quality of information  
• External validation of key metrics, benchmarks  
• Improve  
• Update the core metrics, targets, thresholds  
• Add new or improved processes when appropriate |
Micromation
IT Professional Services

Lets get IT started

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Today’s Challenge
– Cost Pressure
– Risk Mitigation
– Maturity
– Value of IT
– Regulatory Compliance
– IT Governance

Services
– Metrics/Measurement Frameworks
– IT Benchmarking
– IT Performance Improvements
– TCO, IT Health Check, ROI/CBA
– ITIL, CMMI, ITAM, SAM, ISO

Outcome
– Reduce/Avoid Costs
– Mitigate Risks & Threats
– Optimize Effectiveness
– Increase the Value of IT
– Meet Compliance
– Improve Governance
Q&A