



## Measurement-based Alignment of IT Strategies and Business Goals

– Exercise Handouts –

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| <i>Location:</i>      | CTC, Tokyo, Japan                      |

## Exercise: Modeling Goal Hierarchies

### Step 1: Select the Right Business Goals

Describe a typical business goal from your organization and document the motivation that leads to this goal, taking into account context factors (facts) and assumptions.

|                         |   |
|-------------------------|---|
| <b>Basic Motivation</b> | Ask for basic motivation (think of context and assumptions) |
| <b>Business Goal</b>    | Articulate a corresponding business goal                    |

### Step 2: Formalize the Business Goal

Formalize the business goal from Step 1 using the goal template. If you identified more than one goal, select the most important one from your point of view.

|                                   |   |
|-----------------------------------|---|
| <b>Activity</b>                   | What is the main activity of your business goal? e.g., reduce, increase, achieve, pursue, provide, etc.   |
| <b>Focus</b>                      | What is the main focus of your business goal? e.g., cost, profit, turnover, market share, prestige, customer satisfaction, etc.                     |
| <b>Object</b>                     | What is the main object of your business goal? e.g., people, market, a project, collection of projects, customer, services for the population, etc. |
| <b>Magnitude (degree)</b>         | How would you quantify the focus of this business goal? e.g., x%, 1000K, y% more than last year, etc.   |
| <b>Timeframe</b>                  | What is the timeframe for achieving the business goal? e.g., 3 years, 01 January 2008, permanently, from ... to ... , etc.                          |
| <b>Scope (context)</b>            | What is the scope (context, environment)? e.g., whole organization, business unit A, a person, etc.)  |
| <b>Constraints (limitations)</b>  | Are there any constraints? e.g., limited influence on certain factors, laws, mission statement & basic principles, etc.                             |
| <b>Relations with other goals</b> | Are there any relations to other goals? e.g., other business goals, tradeoffs, hierarchy, ordering, etc.  |

**Step 3: Measure Business Goal**

Define a measurement goal and derive corresponding measures and models for measuring the achievement of your business goal. Define decision criteria that help you to determine whether the goal is achieved.

|                            |   |                                      |
|----------------------------|---|--------------------------------------|
| <b>Define GQM goal</b>     | <b>Object</b>   | Customer complaints trend for Splash |
|                            | <b>Purpose</b>  | Evaluation                           |
|                            | <b>Focus</b>  | 10% improvement over history         |
|                            | <b>Viewpoint</b>  | Quality management                   |
|                            | <b>Context</b>  | Web Products Division of XYZ         |
| <b>Measures and models</b> | $CC_{\text{Splash}}$ = Number of customer complaints in the first 12 weeks after release<br>$CC_{\text{History}}$ = Average number of customer complaints in the first 12 weeks after release of a set of baseline products<br>$CC_{\text{Ratio}} = CC_{\text{Splash}} / CC_{\text{History}}$ |                                      |
| <b>Decision criteria</b>   | If $CC_{\text{Ratio}} \leq 0.9$ , the business goal is achieved   |                                      |

**Step 4: Select Strategies**

Define a list of potential strategies for achieving the business goal and select the most promising one. Document all context factors and assumptions that led to your selection.

|   |   |
|---|---|
| <b>Potential Strategy Decisions</b>         | Identify potential strategies for achieving the business goal.  |
| <b>Strategy Decision Selection Criteria</b> | Define the facts and assumptions in order to select one (or more) of the potential strategy decisions identified above. |
| <b>Selected Strategy Decision(s)</b>        | Select the most promising strategy decision(s) considering selection criteria (feasibility, cost, and benefit).         |

### Step 5: Select the Right Lower-Level Goals

Describe the implications of your strategy on lower-levels of your organization (such as software development) and identify corresponding lower-level goals. Document the criteria for selecting one (or more) goals.

|  |  |
|--|--|
| <b>Implications on Lower-Level</b>         | Elicit the implications of the chosen strategy.  |
| <b>Potential Lower-Level Goals</b>         | Identify potential lower-level goals.  |
| <b>Lower-Level Goal Selection Criteria</b> | Define the facts and assumptions in order to select one (or more) of the potential lower-level goals identified above. |
| <b>Selected Lower-Level Goal(s)</b>        | Select the most promising lower-level goal(s) considering selection criteria (feasibility, cost, and benefit).         |

### Step 6: Formalize the Lower-Level Goal

Formalize the lower-level goal from Step 5 using the goal template. If you identified more than one goal, select the most important one from your point of view.

|                                   |  |
|-----------------------------------|--|
| <b>Activity</b>                   | What is the main activity of your lower-level goal? e.g., reduce, increase, achieve, etc.                                      |
| <b>Focus</b>                      | What is the main focus of your lower-level goal? e.g., software reliability, development effort, product maintainability, etc. |
| <b>Object</b>                     | What is the main object of your lower-level goal? e.g., process X, product Y, component Z, etc.                                |
| <b>Magnitude (degree)</b>         | How would you quantify the focus of this lower-level goal? e.g., x%, y% more than last year, etc                               |
| <b>Timeframe</b>                  | What is the timeframe for achieving the lower-level goal? e.g., next 6 months, 12 weeks after next release, etc.               |
| <b>Scope (context)</b>            | What is the scope (context, environment)? e.g., division A, software product X, etc.   |
| <b>Constraints (limitations)</b>  | Are there any constraints? e.g., product functionality, development cost, etc.   |
| <b>Relations with other goals</b> | Are there any relations to other goals? e.g., product development cost goals, schedule goals, etc.                             |

**Step 7: Measure Lower-Level Goal**

Define a measurement goal and derive corresponding measures and models for measuring the achievement of your lower-level goal. Define decision criteria that help you to determine whether the goal is achieved.

|                            |   |                                      |
|----------------------------|---|--------------------------------------|
| <b>Define GQM goal</b>     | <b>Object</b>   | Customer complaints trend for Splash |
|                            | <b>Purpose</b>  | Evaluation                           |
|                            | <b>Focus</b>  | 10% improvement over history         |
|                            | <b>Viewpoint</b>  | Quality management                   |
|                            | <b>Context</b>  | Web Products Division of XYZ         |
| <b>Measures and models</b> | $CC_{\text{Splash}}$ = Number of customer complaints in the first 12 weeks after release<br>$CC_{\text{History}}$ = Average number of customer complaints in the first 12 weeks after release of a set of baseline products<br>$CC_{\text{Ratio}} = CC_{\text{Splash}} / CC_{\text{History}}$ |                                      |
| <b>Decision criteria</b>   | If $CC_{\text{Ratio}} \leq 0.9$ , the lower-level goal is achieved  |                                      |