EPM Development for Evaluation Progress Management

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Korea Information Security Agency
Contents

- Background and Promotion Strategy
- Development Details
- Expected Effects
- Applying 6σ
Background [1/2]

- Lack of active control process for progress management regarding product evaluation schedule and cost
  - Unable to forecast and adjust the different expected result compared with plan
    - [Evaluation team] Evaluation progress management could be made easy, if the standard template for schedule and progress can be provided systematically...
    - [Senior engineer] I need to glance at the overall evaluation progress status...
    - [Senior engineer] Joint work and resource management among evaluation team members...
    - [Quality controller] If the evaluation management process can be improved efficiently...
Background [2/2]

- Enterprise Project Management (EPM) needs to be developed for evaluation of on-going information security system and visible management of the related resources for each evaluation team and enterprise.
  - Impact of the individual work on the entire evaluation business can be identified.

- Evaluation of the information security product has the complete characteristics of the project
  - Temporality of product evaluation
  - Unique result for the unique product and service
  - Evaluation completion by progressive elaboration
Promotion Strategy

- Making the evaluation resource as knowledge and management through systematized classification and integrated management
- Provides integrated and consistence progress management environment

Successful completion of product evaluation
- Visualization of the project status
- Risk and change management
- Quick status check and decision making

EPM system

Cost

Improved business execution capabilities
- Management and control by standard
- Success story benchmarking
- Systematic improvement of evaluation management process

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Development Details [1/7]

- Definition of the classification system for the business, which becomes the project, and control process identification

  - Quantitative and qualitative analysis by evaluation work workflow stage
    - e.g., Contracted, standby, progressing, completion, and others.

  - Functional requirement definition by collecting opinions from evaluators and managers
    - Proposing a standard template (Evaluation execution plan by class, evaluation work plan)

- Identification and definition of the work classification system
  - e.g., Assigning personnel for the evaluation team

- Control process identification
  - e.g., Resource allocation for the evaluation tool to analyze the vulnerabilities
Development Details [2/7]

- Selection of the operation parameters
  - Required resource identification and unit price assignment.
  - Definition of the milestone for the evaluation progress status

- Implementation of the major progress and management functions
  - Analysis of achievement by each work classification system
  - Retrieval of the resource use status
  - Warning of expected achievement compared with plan
  - Project status retrieval and statistical analysis
  - Configuration management by project
## Detailed design: Requirements selection

<table>
<thead>
<tr>
<th>Upper level design elements</th>
<th>Detailed design elements (outputs)</th>
<th>Requirements (principle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information input</td>
<td>1. Submitting materials check</td>
<td>- Checking the list of submission materials for evaluation product</td>
</tr>
<tr>
<td></td>
<td>2. Evaluation</td>
<td>- Input the registration information related with the product requested to evaluate</td>
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<tr>
<td>2. Evaluation order queue</td>
<td>3. Evaluation order queue</td>
<td>- Maintaining the evaluation waiting list information for the contracted evaluation product</td>
</tr>
<tr>
<td>3. Resource and schedule management</td>
<td>4. Evaluation manpower</td>
<td>- Information on the personnel assigned for evaluation</td>
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<td></td>
<td>5. Evaluation schedule</td>
<td>- Evaluation schedule information sharing</td>
</tr>
<tr>
<td>4. Evaluation execution plan</td>
<td>6. Composing the evaluation execution plan</td>
<td>- Entering the evaluation execution plan, based on product characteristics (class, product family) and resources (manpower)</td>
</tr>
<tr>
<td>5. Evaluation progress management</td>
<td>7. Evaluation progress management by product</td>
<td>- Entering the progress ratio for the product that is being evaluated</td>
</tr>
<tr>
<td>6. Generation of recent statistical</td>
<td>8. Evaluation status</td>
<td>- Understanding the evaluation progress status by product</td>
</tr>
<tr>
<td>information and reports</td>
<td>9. Real-time generation of the evaluation statistics</td>
<td>- Maintaining the real-time statistical information (progress ratio and evaluation status statistics) and generation of the evaluation status statistics report</td>
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<tr>
<td></td>
<td>information and report</td>
<td></td>
</tr>
<tr>
<td>7. Current issue sharing</td>
<td>10. Public notice</td>
<td>- Sharing the public notice related with evaluation</td>
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<td></td>
<td>11. Problem information sharing</td>
<td>- Sharing the problem related with evaluation</td>
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<tr>
<td>8. Evaluation completion processing</td>
<td>12. Authentication management</td>
<td>- Keeping evaluation completion product information and status</td>
</tr>
<tr>
<td></td>
<td>13. Commission calculation</td>
<td>- Calculating the evaluation commission by evaluation agency and product</td>
</tr>
<tr>
<td>10. Standard and default value</td>
<td>15. Standard and default value</td>
<td>- Setting/Modify the default value by standard form and menu</td>
</tr>
<tr>
<td>11. System configuration</td>
<td>16. System configuration</td>
<td>- System management, such as adding/deleting/modifying user, organization, group, authorization environment setting value</td>
</tr>
</tbody>
</table>
Detailed design: System configuration diagram
Design details: Project management function process
Development Details [6/7]

- Implementation schedule and deliverables

- Set up Detailed Implementation plan
- Figure out functional requirements
- Define & develop business classification system
- Test and problem resolution
- Apply 66 and pilot operation
- Launch regular service

- EPM system – 1 type
- Requirement analysis – 1 type
- Design document – 1 type
- Administrator/User guide – 1 type

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9th ICCE 2008 – SEOUL, KOREA 11/16
Development Details [7/7]

- Interface example of the product to develop
Expected Effects

- Prevention of the evaluation resources by implementing progress and risk management that minimizes the impact by the schedule change
- Able to cope quickly with risk of changed achievement compared with plan
- Increased efficiency of team member productivity and evaluation team management by establishing the systematic communication system for the progress status
- Laying a foundation of transparent evaluation management that secured visibility of evaluation team management
- Improved customer satisfaction and output quality by strictly complying with schedule plan
- Utilizing the raw data for evaluation commission cost calculation and PR about the systematic evaluation management system
**Applying 6–Sigma (Simulation)**

**Project summary report: Selecting optimal concept alternatives**

<table>
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<tr>
<th>Project name</th>
<th>EPM development for evaluation progress management</th>
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<td>Promotion background</td>
<td>- Active and real-time management for comparing product evaluation plan with achievement and invested resources is required, because of evaluation congestion due to increased evaluation application and the change in the evaluation commission system.</td>
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</tbody>
</table>
| Problematic technology | - Difficult to cope with the problem like delayed evaluation quickly, since the evaluation status is identified manually.  
- Degraded evaluation resource efficiency due to insufficient response to risk and change management  
- When calculating the evaluation commission, there can be an argument about investing personnel and period. |
| CTQ | Manual work (4 hours a week) → Keeping real-time status |
| Objectives | Provides product evaluation status and develops the decision-making support system  
- Real-time management of the evaluation status, such as comparison between plan and achievement  
- Invested resource and schedule management |
| Project scope | Information security system evaluation |
| Expected effects | 1. Reduced various costs  
2. Quick decision-making  
3. Increased management transparency |
| Team organization | Noh Byeong-kyu (champion), Sim Won-tae (project leader), Bahl Nam-kyun (team member) |
Applying 6-Sigma (Simulation)

**Expected effect**

- Information collection rate: 100%
- Capturing time: 30 min/week
- Analysis time: 2 hr./each
- Consistency and accuracy: 100%

“Real-time evaluation information management”