Enterprise Applications Health Improvement Program

30th April, 2015

by

Eswaran Thandi
Principal Architect - Enterprise
What is Enterprise Application Health?
Why is it important?
Who are the stakeholders?
The Process Life Cycle - Illustrative View
Life Cycle Details
Expected Outcomes
Expected Benefits
Implementation Challenges
What is Enterprise Application Health?

Strengthen the **application stability** and **longevity** and extend to support **business continuity** and **agility** without increasing the IT cost and human capital.
Why is it important?

- Application Longevity
- Optimize OpEx
- Business Agility
- Expertize
- Quick Time to Market
- Future Focused
- Customer Delight
Who are the stakeholders?

**ARCHITECTURE**
- Business Architect
- Application Architect
- Technology Architect

**BUSINESS**
- Business Systems Team

**BUSINESS-IT**
- Business Services Manager
- Business Analyst

**ENGINEERING**
- Development Manager
- Development Lead
- Technology Specialist

**ARCHITECTURE**
- Executive Board

**BUSINESS**
- Business Systems Team
Life Cycle Details
Consultation

Input
- Outage History with RCA
- Functional & Technical Documents
- GWP (if Review Cycle)
- Questionnaire
- AHR

Stakeholders
- Lead Architect
- Architecture Review Board
- Business Solutions Team
- Support/Operations Team
- Business

Activities
- Information Gathering

Output
- Updated Questionnaire
- Problem Statement
- Application Blue Print - Updated

1-2 weeks

Tools, Methods & Frameworks
- ISO/IEC 25010:2011
- Enterprise Architect
- Interviews & Workshops
Application Blueprint
(Expected Outcome)

- Captures Integration Architecture
- Captures Business-Application components Mapping Information
- Captures Level 0 sequence diagrams for all unique flows
- Captures End-to-End Deployment View from Edge to Storage
- Captures Application Components with their relationships

Captures Business-Application components with their relationships
Captures Level 0 sequence diagrams for all unique flows
Captures End-to-End Deployment View from Edge to Storage
Captures Integration Architecture
Captures Application Components with their relationships

Physical
Dependency
Realization
Sequencing
Skeleton

(Expected Outcome)
Diagnosis

Input
- Problem Statements
- Questionnaire
- Application Blue Print
- EA – Artifacts

Stakeholders
- Lead Architect
- Architecture Review Board
- Specialist Team
- Engineering Team
- Infrastructure Team

Activities
- Analysis of
  - Questionnaire responses
  - Problem Statement
  - Test/Profiling Results
  - Feasibility of Optimizations & Improvements (Tech, Functional, Cost)

Output
- Assessment Summary
- Health Index

1 week

Tools & Methodologies
- Experts Review
- Customized ATAM
- Health Index Calculator
General Diagnosis

Enterprise Applications Health Index 3.3

Specialists Diagnosis

<table>
<thead>
<tr>
<th>Weightage</th>
<th>Area/Factors</th>
<th>Infrastructure</th>
<th>Integration</th>
<th>Database</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Performance</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Sustainability</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Availability</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Maintainability</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Reliability</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Scalability</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Usability</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Area HI</td>
<td></td>
<td>3.43</td>
<td>3.29</td>
<td>3.14</td>
<td>3.43</td>
</tr>
</tbody>
</table>

Health Index Calculation Method

Quality Attribute Specific HI = AVERAGE(Criticality*Compliance) of all scenarios in each Quality Attribute

Layer Specific HI = WEIGHTED AVERAGE(Index calculated based on Quality Attributes in each Layer)

Application Health Index (EAHI) = WEIGHTED AVERAGE(Criticality*Compliance) of all scenarios

Health Assessment Report (Expected Outcome)
Advice

**Input**
- Assessment Summary

**Stakeholders**
- Lead Architect
- Architecture Review Board
- Specialist Team
- Engineering Team
- Business Solution Design
- Service Management Team

**Activities**
- Identification of Solution Options
- Classify the Tactical & Strategic Options
- Review the Options with all the IT Stakeholders
- Present the Options to Business Stakeholders
- Identify the list of action items for PoC (if required)

**Output**
- Draft versions of
  - GWP (*Get Well Plan*)
  - HIP (*Health Improvement Plan*)
- Detailing GWP
- Estimation/Business Case

**Tools & Methodologies**
- Enterprise Architect
- DES Modeling
- CBAM

1 week
Recovery

Input
- GWP
- Executed PoCs results

Stakeholders
- Lead Architect
- Architecture Review Board
- Specialist Team
- Engineering Team
- Solution Design

Activities
- Implementation of Tactical Solutions
- Detailed Plan for Strategic Solutions

Output
- GWP Implemented and validated
- HIP Detailing

1-3 weeks

Tools & Methodologies
- Enterprise Architect
- Health Monitoring Dashboard
- Technology Specific Utilities
# Application Wellness Clinic-Portal

## (Expected Outcome)

### Enterprise Applications Dashboard

<table>
<thead>
<tr>
<th>Application</th>
<th>Business</th>
<th>EAHI</th>
<th>Last EAHI</th>
<th>Last Recovered Date</th>
<th>Next Due Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracking System</td>
<td>Operations</td>
<td>4</td>
<td>3.8</td>
<td>15-Oct-14</td>
<td>15-Jan-15</td>
<td>Click here</td>
</tr>
<tr>
<td>Analytical App</td>
<td>Commercial</td>
<td>4.2</td>
<td>4</td>
<td>30-Sep-14</td>
<td>01-Jan-15</td>
<td>Click here</td>
</tr>
<tr>
<td>eCommerce Engine</td>
<td>Commercial</td>
<td>4.5</td>
<td>4.2</td>
<td>31-Oct-14</td>
<td>31-Jan-15</td>
<td>Click here</td>
</tr>
<tr>
<td>CRM System</td>
<td>Operations</td>
<td>4.5</td>
<td>4</td>
<td>31-Dec-14</td>
<td>31-Mar-15</td>
<td>Click here</td>
</tr>
<tr>
<td>Optimization System</td>
<td>Operations</td>
<td>3.2</td>
<td>0</td>
<td>InProgress</td>
<td></td>
<td>Click here</td>
</tr>
<tr>
<td>Security System</td>
<td>Security</td>
<td>4.1</td>
<td>3.5</td>
<td>31-Dec-14</td>
<td>31-Mar-15</td>
<td>Click here</td>
</tr>
<tr>
<td>Finance System</td>
<td>Finance</td>
<td>4.8</td>
<td>4.5</td>
<td>30-Nov-14</td>
<td>02-Mar-15</td>
<td>Click here</td>
</tr>
<tr>
<td>HR System</td>
<td>HR</td>
<td>3</td>
<td>0</td>
<td>InProgress</td>
<td></td>
<td>Click here</td>
</tr>
</tbody>
</table>

### Health Status

- **Good Health**, 10
- **Satisfactory Level**, 2
- **Requires Treatment**, 10
- **Not Assessed**, 15

### Quaterly Status Board

- **Diagnosed**: 10
- **GWP**: 10
- **HIP**: 2
- **Not Started**: 15
Expected Benefits

- Preventing failures/issues
- Transparency to Business
- Cost Optimization
- Quick Solution
- Planning
- Single Point of Ownership
Implementation Challenges

- Process Changes
- Expertize
- Information Inconsistency
- Stakeholders
- Environment/Platform
Q & A