TRANSFORMATION OF LEGACY APPLICATIONS
Over the years, organizations have acquired a complex network of legacy applications. Sometimes these legacy applications co-exist with applications that use more recent technologies. Integrating and maintaining such a heterogeneous setup can be a big drain on the resources that could be made available for more critical requirements, achieve greater efficiencies and derive more value from the existing applications. It would therefore be more beneficial to consolidate applications on fewer platforms using technologies that are more in sync with contemporary business requirements.

Metalogic Systems provides a dynamic blend of automated software transformation and migration services to help organizations worldwide leverage and build on their corporate software assets. Our automated solutions allow customers to rapidly adopt state-of-the-art technology and quickly respond to changes in business environment.
Legacy Transformation Services:

Metalogic Systems provides a comprehensive solution for automated transformation of legacy applications to open systems on a modern development environment. The re-engineering and transformation service offering of Metalogic Systems helps organizations to consolidate on fewer platforms and integrate applications more effectively. This may involve software transformation and migration across platforms, databases and operating systems.

With a focus on reusability of corporate software assets, Metalogic Systems helps its customers and partners to recover, modernise and reuse business rules and data models embedded in their existing applications. Metalogic Systems then re-architects and re-deploys them on a contemporary technology platform with state-of-the-art user interface.

With a high degree of automation built into its services Metalogic ensures quick and accurate deliverables, thereby reducing project cost, time and risk significantly.

The process encompasses the following:

- Conversion of the legacy database [flat file, Network to Hierarchical] to relational for deployment on a modern RDBMS.
- Incorporating a Web based Graphical User Interface.
- Partitioning of host-based, monolithic applications to 2-tier or 3-tier architecture.
Software Transformation Solutions

Software transformation solutions from Metalogic addresses the following platforms:

<table>
<thead>
<tr>
<th>Software Transformation Solutions</th>
<th>IBM</th>
<th>IMS</th>
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</thead>
<tbody>
<tr>
<td>COBOL</td>
<td>DB2</td>
<td>IDMS, IDS-II</td>
</tr>
<tr>
<td>PL/I</td>
<td>DEC-Rdb</td>
<td></td>
</tr>
<tr>
<td>BASIC</td>
<td>ADABAS</td>
<td></td>
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<tr>
<td>Natural</td>
<td>DATACOM</td>
<td></td>
</tr>
<tr>
<td>IDEAL</td>
<td>File systems like IBM VSAM, DEC</td>
<td></td>
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<tr>
<td>Easytrieve</td>
<td>RMS, BULL UFAS</td>
<td></td>
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<tr>
<td><strong>OLTP –</strong></td>
<td>IBM</td>
<td>IDC</td>
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<tr>
<td>IBM CICS, BULL TP8 etc.</td>
<td>ICL</td>
<td></td>
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<tr>
<td>Command Language –</td>
<td>BULL</td>
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<tr>
<td>IBM-JCL, BULL-JCL, ICL-SCL,</td>
<td>Digital</td>
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<tr>
<td>DEC-DCL</td>
<td>Data General</td>
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<tr>
<td>Screen management –</td>
<td>CDC Cyber</td>
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<tr>
<td>DEC Forms, Rally etc.</td>
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Common target platforms

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<tr>
<td>RDBMS</td>
<td>ORACLE, DB2, MS-SQL Server</td>
</tr>
<tr>
<td>Application Server, TP Monitor</td>
<td>Weblogic, Websphere, JBOSS</td>
</tr>
<tr>
<td>Architecture</td>
<td>Two or three tier</td>
</tr>
<tr>
<td>User Interface</td>
<td>Graphical – Windows or Web based</td>
</tr>
</tbody>
</table>

* The above lists are not exhaustive.
* Software products/brands that have been mentioned in the tables above are to serve as examples only. The service provided by Metalogic Systems is not tied to any specific brand or product.
Methodology:

The migration process encompasses both the data model and the source code. The source codes of the programs from the existing applications are **reverse engineered, renovated** and then **forward engineered** to generate programs in the target database environment.

The methodology can be aptly described through the following steps:

- **Reverse Engineering** for Program Understanding & Data Model Recovery
- **Data Remodelling**
- **Application Partitioning** to Client Server or Web based Architecture
- **Forward Engineering** for Program Generation
- **Data Migration**

The program & data model transformation is followed by full support in data migration and deployment of the transformed application.
**Schematic Diagram:**

**A view of the Transformation Anatomy:**

- Source Code
  - Screen Scraping
  - Data Model Recovery
  - Program Understanding
  - Coupling And Dependencies

- Repository

- Forward Engineering
  - GUI And Front-end Programs
  - Back-end Process
  - Data Access Layer And DDL
  - Data Migration Utilities
Creating Value:

The solution leverages the existing assets and builds on the time tested mature applications. It salvages the investments made on the intellectual property and modernizes them to conform to the contemporary technologies with minimum impact on the business.

The tool-based solution will provide a host of benefits. Some of them are highlighted below:

**QUICKER TURNAROUND**

The automated conversion process ensures that the turnaround time is kept minimal as compared to the time taken in manual re-engineering or conventional re-development of software. The resulting saving of time could easily prove to be decisive.

**LOWER RISK OF MIGRATION**

The methodology adopted retains the business logic embedded in the existing application, thereby dramatically reducing potential risks to the business.

**CONSISTENT QUALITY**

The automated procedure ensures elimination of the human errors typical of any manual software re-engineering process, thereby minimizing the defects in the deliverables.

**SAVES MONEY**

The automated process results in substantial reduction in effort and time, thereby ensuring significant cost savings. Consequently, this solution helps to reduce the Total Cost of Ownership of the system.

**MAKES BUSINESS APPLICATIONS “FUTURE PERFECT”**

The entire endeavor moves business applications into a scalable, responsive, integrated and open environment.
About Us:

We are an ISO 9001:2000 company specializing in system renovation services. Our core competence lies in providing automated solutions for transformation of legacy applications & data to modern platforms.

Our suite of service offerings includes:

- Legacy Transformation
- Oracle Migration
- Sybase Transformation
- Ingres Transformation
- Data Migration

We provide a dynamic blend of software application re-engineering & development services to help organizations worldwide design & build their businesses in the new economy.

Using our proven onsite-cum-offshore delivery model, we have executed major projects in Insurance, Banking, Manufacturing, Utilities & the Government sector across USA, Europe, Australia and India.

Our development center is located in Calcutta, India, which provides excellent offshore development facilities in terms of reduced cost of development, optimal utilization of resources & access to tools & methodologies backed by our Quality Management System, which is (as already stated) certified under ISO 9001:2000 quality standard. Our other sales offices are located in Columbia, Melbourne and London.

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