**Summary**
eQube-MI Solution most effectively addresses the complex business needs of Application migration, and data integration. eQube-MI Solution is built on top of eQ’s proven analytics platform, eQube.

**Benefits**

**Master data management**

**Enterprise work-flow facilitator**

**Risk mitigator for Application Migration – EOL systems**

**Integration services bus**

- Ability to extract and load data honoring an application’s security and context
- No customizations on the “source” or the “destination” systems
- No intermediate data storage required for data migration or for enterprise-wide analysis
- In-built “visibility infrastructure” assists in rapidly identifying migration and integration data sets
- Provides comprehensive data quality validation services throughout migration and integration life cycle
- Dramatically lower Total Cost of Ownership for data migration and integration needs

**Substantially leveraging Investments across the enterprise**

The business issue of “Master Data Management” has taken the center-stage at organizations across industries and geographies. Having a “single-version-of-truth” is no longer a key objective; rather it has become a necessity for organizations to be nimble and profitable in the hyper-competitive market-place. At times, retiring certain legacy or enterprise systems and consolidating them under a single system does not seem to be a mid-term practical option. Instead, keeping systems in-sync in the real-time that enables the availability of the single-version-of-truth across the enterprise, irrespective of the number of authoring systems; seem to be the most practical approach. In short, Application Integration has become essential to achieve and more importantly, fully leverage, Master Data Management.

In addition, companies are contemplating “Enterprise-wide work-flow management systems” that will orchestrate the movement of or synchronization of critical data across disparate business systems triggered off of automated or human-initiated business events. The potential for bottom-line business value unleashed by such capability is enormous!

Conventional data integration offerings in the market-place try and address these business issues by utilizing traditional data ETL (extraction-transformation-load) techniques. They seem to be offering a collection of “tools” with custom connectors rather than comprehensive solutions.

eQube-MI Solution is built on the revolutionary services-oriented analytics platform, eQube®. It is a comprehensive solution built ground-up to address the issues of Master data management, Enterprise work-flow facilitation, Risk mitigation for application migration, and provisioning of Integration services bus. Due to its core architectural underpinnings, while migrating or integrating applications, no customization of the source and destination systems is required. eQube-MI allows “loose-coupling” of the systems instead of point-to-point or heavy custom code based connector approaches.
Key Features:

- Services-oriented platform
- No Customizations required to either the "source" or "destination" systems
- Built-upon the proven "eQube Adapter and Plug-in architecture"
- Leverages eQube EMS and Listener modules – to extract data based on events
- Ability to consume "event triggers" (e.g. e-mails, app events, database triggers, file systems, scheduled events, etc.)

The core eQube platform offers the advantages of high-availability, hyper-throughput, service oriented platform that is scalable, and the flexibility of eQube to interact with the source and destination systems at the object/abstract level. All of these capabilities result in rapid deployment of the migration or integration transactions and ease of maintenance and update of the transactions.

In addition to being a “tool-kit”, many of the conventional offerings fall substantially short on two critical aspects:

1. Identification of datasets (“I”): where the tool helps in rapid identification of patterns, classifications, and probability of data quality issues. Such analysis helps up-front in measuring and analyzing the data from completeness, consistency, and accuracy perspectives. Collectively, we refer to such capability as “Data Identification & Quality” analysis capability.

2. Validation capability (“V”): Throughout the life cycle of Data identification, data quality, and data migration & integration activities, end-to-end validations are essential. To the extent practical, these validations should be integrated as a part of the complete solution. The core eQube Platform provides the capability where the data from source and destination systems are validated after migration and/or integration to assure the quality and completeness of the migrated and/or integrated data.

eQube-MI Solution provides the entire I-E-T-L-V capability (i.e., data Identification – Extraction – Transformation – Load – Validation). This revolutionary solution comprehensively addresses the following business issues:

- Data Identification and Data Quality:
  - Rapid identification of “what is in the source data?”
  - Data profiling – patterns, classifications, and probability assessments
  - Data integrity issues identification – correctness, completeness, and accuracy
  - Data correction (for “source” data sets) and repair (for “destination” data sets) capability
  - Data Validation – life-cycle wide audits and trends, “source” and “destination” validations–“closing the loop!”

- Data Migration and Integration:
  - Ability to migrate and integrate data from any source and in any format
  - Honors the source and destination system’s security and application context
  - Data identification, extraction, cleansing, transformation, load, and validation
  - Unprecedented error capturing and reporting capability: detailed error reporting based on the application context for root-cause analysis behind the error(s).
**Key Features:**

- Ability to “push” data to multiple destinations (synchronous/asynchronous and phased/non-phased commits)
- Data “push” and “pull” via web-services
- Rule-based comprehensive data transformation, translation, and correction
- Provides comprehensive error capture and messaging
- Provides diagnostic “health” reports of the entire system
- Audit - trend analysis – feedback
- Provides end-to-end data validation
- Enterprise-wide visibility:
  - Single-view-of-data representation
  - End-to-end data validation
  - No need for a data-mart or data warehouse
  - Unprecedented flexibility in the enterprise-wide visibility – detailed reports, metrics, KPIs, dashboards

**Use Cases**

**Application migration**

As organizations decide to move from legacy or old applications to enterprise/COTS applications, substantial legacy data needs to be cleansed and migrated to the new ‘destination’. Traditional approaches have been either point-to-point solutions or are based on custom system connectors. eQube-MI provides the complete infrastructure to ensure that the Application is migrated without requiring expensive and time-consuming custom solutions. The entire logic of data cleansing, data transformation, data sequencing, and the data load is managed by eQube-MI.

**Examples:**

1. **Migrating data from legacy product data management system to Teamcenter**
   - A data map of ‘source’ data (tables, rows, columns) and ‘destination’ object model is established in eQube-MI. The entire logic of data cleansing, data transformation, data sequencing, and data load is handled in eQube-MI’s integrated business transaction handler. eQube-MI then reads the data map and then executes the transaction according to the defined data migration task.
   - No customizations are required to either the ‘source’ system or the ‘destination’ system. The entire logic is managed by eQube-MI in a loosely-coupled manner.

2. **Migrating data from Teamcenter Enterprise to Teamcenter Unified**
   - A data map of ‘source’ or Teamcenter Enterprise object model and the ‘destination’ or Teamcenter Unified object model is established in eQube-MI. The entire logic of data cleansing, data transformation, data sequencing, and data load is handled in eQube-MI’s integrated business transaction handler. eQube-MI then reads the data map and then executes the transaction according to the defined data migration task.
   - No customizations are required to either the ‘source’ system or the ‘destination’ system. The entire logic is managed by eQube-MI in a loosely-coupled manner.
Application Integrations

The business needs to integrate key systems in real-time or near real-time mode are unprecedented. The ability to innovate, reduce costs across processes and products, and deliver newer products or variations at higher speed and at lower costs are the key business drivers behind the master data management, enterprise work-flow management systems, and integration services bus initiatives.

Due to these strategic initiatives, companies across industries have critical needs to ensure that data from their legacy systems, ERP, Manufacturing execution systems, to PLM systems are integrated. eQube-MI provides this very capability rapidly and at substantially lower total cost of ownership.

Examples:

1. Integrating data from ERP, Process planning (HMS-CAPP), Contracts Management system, Purchasing system, and PLM (Teamcenter)
   - The customer creates and maintains the product design and the As-Designed BOM in Teamcenter. At a certain milestone defined in an engineering work-flow in Teamcenter, on a trigger from eQube’s EMS (event management system) module, eQube-MI transfers the As-Designed BOM data with effectivities to HMS-CAPP. A process engineer working in HMS-CAPP then develops a ‘preferred’ and its ‘alternate’ process plan.

   Once the process plans are created, eQube-MI gets the notification from HMS-CAPP and takes the action of advancing the status of the Teamcenter work-flow step. At the ‘release’ step in the Teamcenter work-flow, eQube’s EMS module initiates an action of transferring the As-Designed BOM with effectivities and the process plans to BAAN. BAAN then checks the Process plans received from Teamcenter with HMS-CAPP for validations and then transfers the As-Designed BOM with manufacturing process routing information to the Shop-floor system. As the product goes through physical assembly the As-Manufactured BOM gets updated in Teamcenter.

   eQube-MI acts as the main intermediary to keep all the transactions in-sync for data integration and provides validations throughout the process.

2. Design-once and re-use-everywhere – keeping design data in-sync:
   - The customer has geographically distributed design teams. Unless the design-data and product structures are uploaded and updated in a Master repository, the many business benefits of design re-use cannot be realized. eQube-MI acts as the facilitator to upload and to keep the Master repository in-sync ensuring a single-version-of-truth for this enterprise-wide Master data management.