



Let's Solve

# LTI's Microservices-Based Integration Framework



A Larsen & Toubro  
Group Company



## Microservices-Based Integration

The transformation of enterprises into successful digital businesses demands flexibility in the ways integration capabilities are achieved. Business-oriented roles, with limited to no IT experience, require integration technologies to support business requirements through self-service functionalities. The need of the hour is to leverage easy-to-use, configurable technologies that enable citizen integrators to build and consume integration flows using cloud-based integration platforms. These platforms must allow business users to solve simple integration needs through direct, "hands-on" involvement. However, today's integration infrastructures, which are still largely the established turf of well-known technologies such as enterprise service buses (ESBs), data integration tools, B2B gateways,

and even integration platform-as-a-service (iPaaS), often aren't up to the challenge. By 2021, at least 50% of large organizations will have incorporated citizen integrator capabilities into their strategic integration infrastructure.

API-led Microservices have emerged as unique solution offerings, enabling citizen integration to build integrations that are scalable, flexible and agile, and help improve development quality. API-led Microservices enable developers to break solutions into smaller components that can be independently developed, enhanced and replaced, thus facilitating flexibility, agility and scalability, while reducing costs.

# LTI's Microservices-Based Integration Framework

LTI's Microservices-Based Integration Framework (MBIF) enables faster development of integrations using microservices, and provides all benefits of the Microservices architecture. MBIF comprises a set of microservices, performing specific tasks in integration flows such as message persistence, message verification, business rules validation, message transformation, transmission, etc. The framework provides drag-and-drop designer tool to design integration flows and customize flow logic for specific flow type, country, message type, and target application. Each service can be customized further to change its behavior as per the process flow.

**MBIF comprises a machine learning component** - Integration Advisor that analyzes integration flows from flow repository, and new flows that are being built; and learns from loads of flows, services, sequence patterns, data formats, validation patterns and target protocols. It also applies these learnings to suggest the best suitable integration flows to users, thus promoting reusability and reducing time-to-market.

## MBIF Components



### Web Flow Designer -

Define individual services | Define process flows | Design integration flows using drag-and-drop option and sequence service calls | Customize services for integration flows, data formats, message validation, business rules, target protocol



### Integration Metadata - Maintain Metadata at the following level:

Process type | Process sub type | Message type |  
Message | Source system | Target System



### Design Template

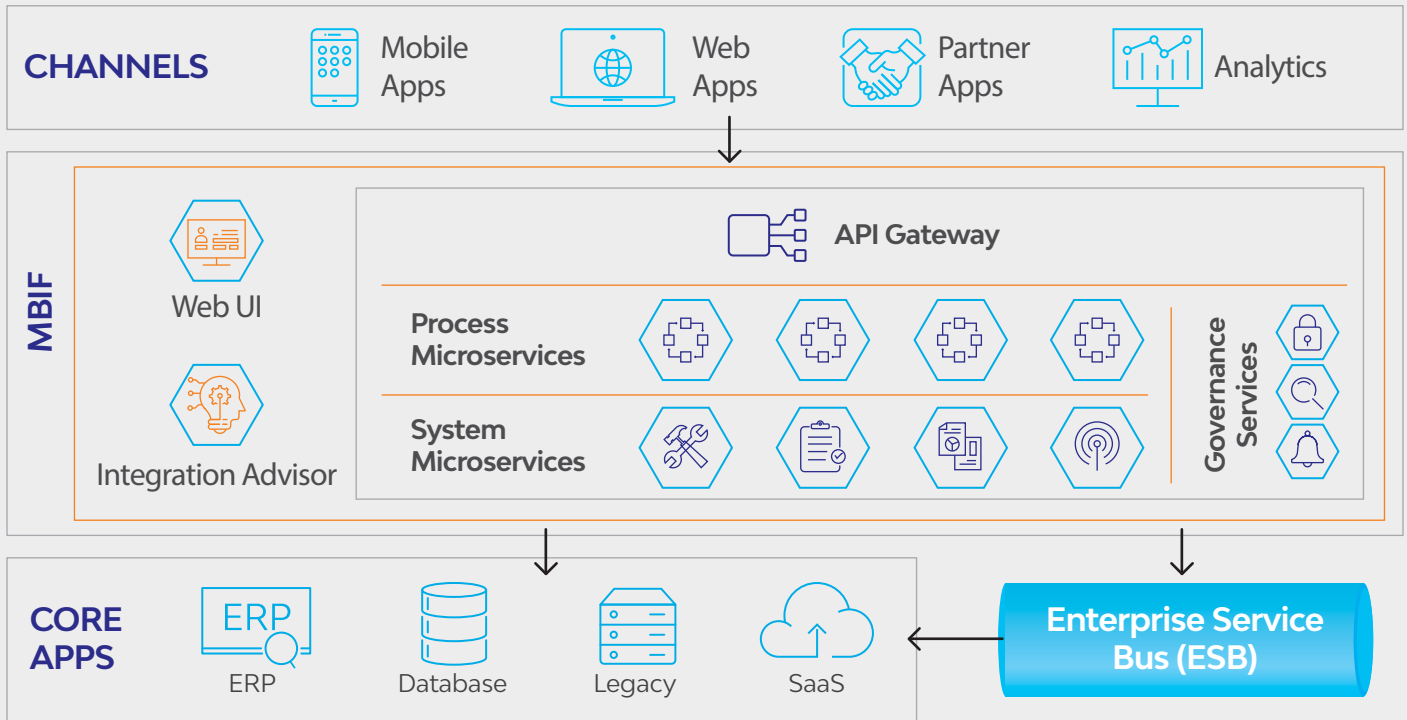
Template-based | Pre-built sequence of flow |  
Provision of hooks/user exits | Configurable flows



### Integration Advisor for Intelligent Integration - ML Features:

Advanced algorithms | Analyze flows, data formats, sequence patterns | Analyze business rules,  
target application protocols | Advise best integration flows

# MBIF – Reference Architecture



## MBIF - Benefits

- Accelerated development with typically 60% reduction in development efforts
- Standards-based development (like, SpringBoot, DevOps tools, Openshift Cloud Platform)
- Integration Advisor – Intelligent integration flows
- Citizen integrator support
- Improved collaboration
- Promotes high reusability
- Highly scalable and agile

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