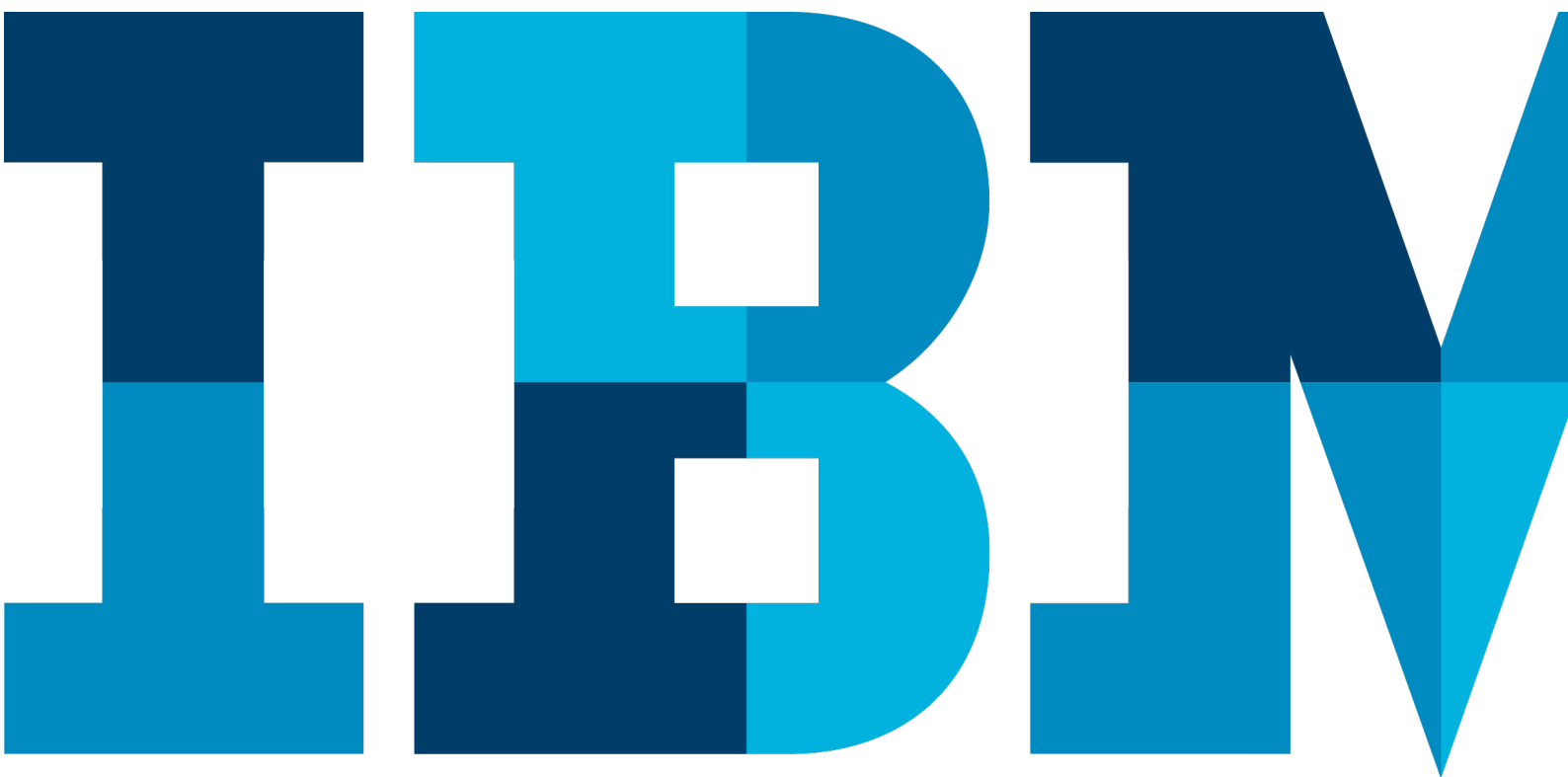


# Application Mediation

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## 1 Preface

A BluePaper is an **IBM** Point of View or a specific response to a Client “Ask” that has been approved by the Sector’s Chief Technology Officer (CTO), Industry Technical Leader (ITL) and/or Client Technical Advisor (CTA), supported by the IBM Global Technical Community of which he or she is a certified member.

**This BluePaper provides an overview of FMT’s “Application Mediation”** platform which is an innovative, simplified and extremely rapid approach and technology that side-steps the common Information Technology barriers caused by legacy systems and their complex, costly and lengthy application and integration development and release life-cycles.

**“Application Mediation” is a new term that was coined to optimally describe FMT’s differentiated capability.**

FMT (<http://FMT.com>) is an IBM Business Partner.

**FMT’s Application Mediation platform can be treated as:**

1. A tactical rapid response (yet strategically aligned) solution enabler
2. A complimentary and supplementary layer (capability) to the Enterprise Services Bus (ESB), within a Services Oriented Architecture (SOA).
  - i. An **ESB mediates and orchestrates enterprise Services** for and to Interaction Services (Front Ends), Process Services (BPM), Information Services (e.g. Master Data Management and Business Analytics and Optimization), Partner Services, Business Application Services and Access Services (ISV Packages and Existing IT Assets)
  - ii. **Application Mediation, as the term implies**, mediates and orchestrates Application (including SOA Middleware) Stream Content. Application Mediation can work in conjunction with an SOA (and its ESB) providing balanced options (and transition) between tactical and strategic requirements and their risk, time and cost.

As such, this paper also positions “Application Mediation” in context of SOA and Industry Frameworks, including the SOA Solution Stack as the integration layer (including the Business Process layer).

A number of additional BluePapers are available on major industry topics, including “Business Process Management (BPM) and Service Oriented Architecture (SOA)”.

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## 2 Executive Overview

### 2.1 FMT and Application Mediation



This paper provides an overview of FMT’s “Application Mediation” platform which is an innovative, simplified and extremely rapid approach and technology that side-steps the common Information Technology barriers caused by legacy systems and their complex, costly and lengthy application and integration development and release life-cycles.

“Application Mediation” is a new term that was coined to optimally describe FMT’s differentiated capability.

FMT (<http://FMT.com>) is an IBM Business Partner.

This paper also positions “Application Mediation” in context of a Service Oriented Architecture (SOA) with the IBM WebSphere product suite as the integration layer (including the Business Process layer).

FMT’s approach and technology can be applied to a multitude of business problems and needs, however these can be categorised on repeating need-solution patterns such as:

<b>F</b>	<b>Functional Needs</b>	New and Changed Business & IT Functional/ Non Functional Capability Requirements
<b>M</b>	<b>Management Needs</b>	Operational (Monitoring, Analysis & Reporting) Requirements
<b>T</b>	<b>Threat Needs</b>	Security, Risk, Policy Requirements

### 2.2 The simple and unique Value Proposition

In today’s business environment, new or changed business capability needs to deliver rapid and tangible Return on Investment. FMT’s Application Mediation Platform offers capabilities for achieving just that. Unlike risky remedies or having to wait for that strategic multi-year program, FMT’s platform enables an “immediate” solution whilst empowering the strategic program – keeping both Business and IT and their tactical and strategic needs aligned and satisfied. This represents a true win-win outcome.

FMT’s Application Mediation platform hooks into the content stream between the requestor of a banking transaction (human, application or SOA middleware) and the provider (application or SOA Middleware). This effectively allows the perception of real-time application changes (or correctly “proxy” (on behalf of) / virtual (as if it were real) changes). This allows changes to and extensions of application functionality and protection. You can use this ability to save valuable time and reduce risk when you need it most and to help alleviate and bridge legacy services to new implementations.

**Rapid Response: No code changes to Applications**

Application mediation capabilities perform proxy (on behalf of) / virtual (as if they were real) changes to the Application or SOA Middleware.

<b>1. Access</b>	Access the Request or Reply Stream (Content) <ul style="list-style-type: none"> <li>• User to Application</li> <li>• Application/SOA Middleware to Application/SOA Middleware</li> </ul>
<b>2. Analyze &amp; Apply</b>	Analyze the stream's content & Apply Mediation Configuration (Context & Rules to link to Actions)
<b>3. Act</b>	Decision, Processing, Routing, Transformation & Notification
<b>Allow or Deny</b>	Allow or Deny a Request
<b>Add</b>	Insert new Content to original Content Stream
<b>Adjust</b>	Change Content of Original Content Stream
<b>Assist</b>	Access Systems & Perform Processing
<b>Advise</b>	Trigger an Event, Notification or Report

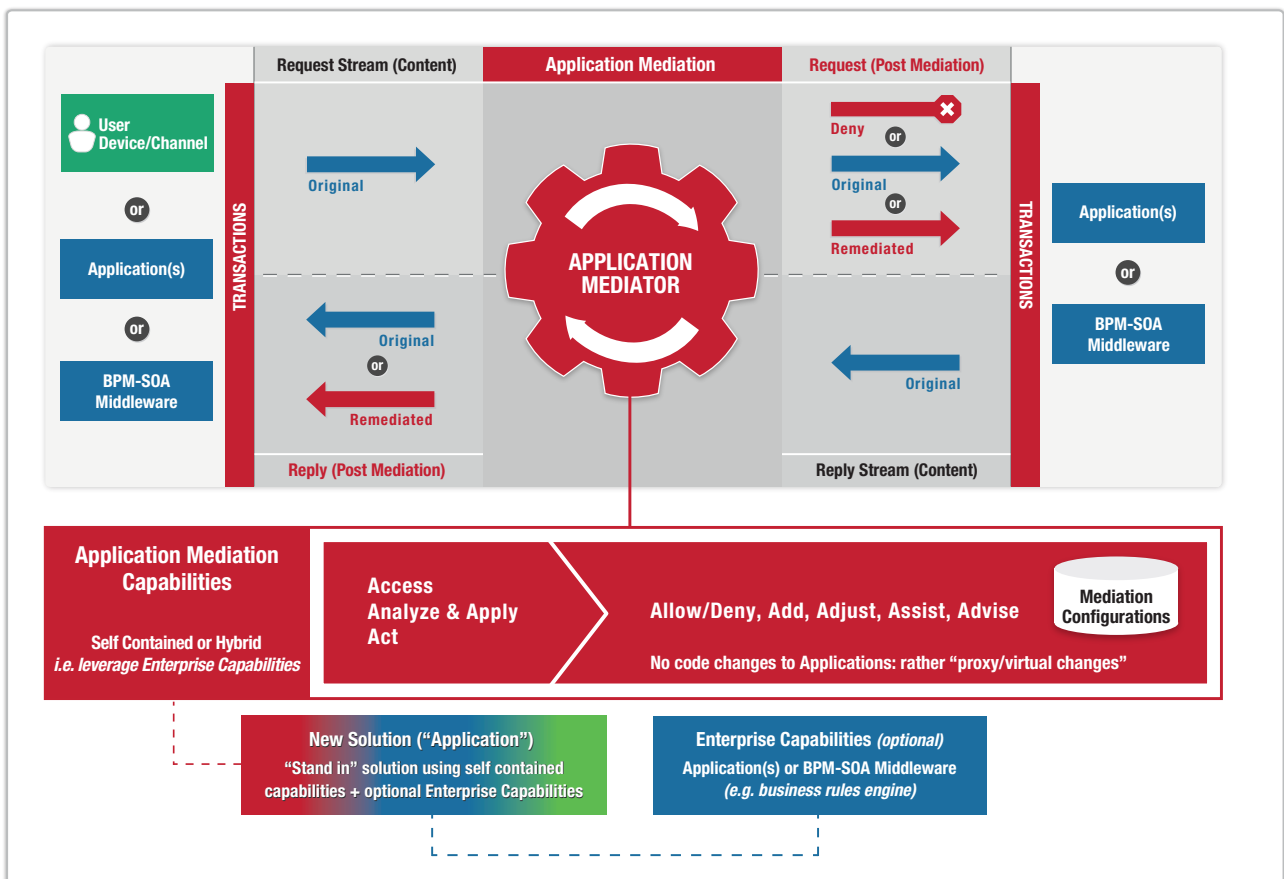


Figure 1 Application Mediation Overview

### 2.3 Application Mediation Solution Positioning

FMT's Application Mediation platform can be used as:

1. A tactical rapid response (yet strategically aligned) solution enabler
2. A complimentary and supplementary layer (capability) to the Enterprise Services Bus (ESB), within a Services Oriented Architecture.
  - a. An **ESB mediates and orchestrates enterprise Services** for and to Interaction Services (Front Ends), Process Services (BPM), Information Services (e.g. Master Data Management and Business Analytics and Optimization), Partner Services, Business Application Services and Access Services (ISV Packages and Existing IT Assets)
  - b. **Application Mediation, as the term implies**, mediates and orchestrates Application (including SOA Middleware) Stream Content. Application Mediation can work in conjunction with an SOA (and its ESB) providing powerful scenarios to provide balanced options (and transition) between tactical and strategic requirements and their risk, time and cost.

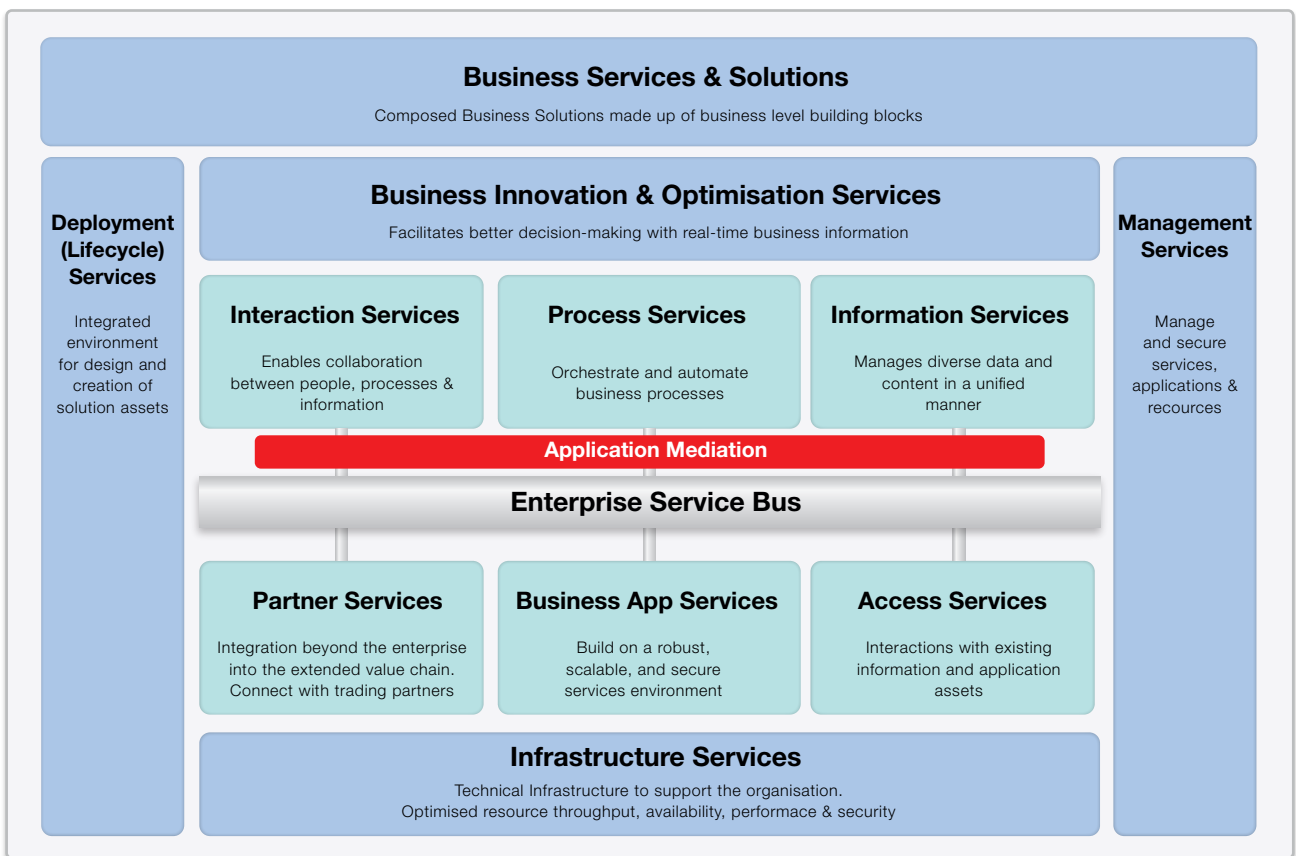


Figure 2 Application Mediation and Service Oriented Architecture

## 2.4 Business Usage Examples

“As flexible as your imagination...” in that anything that can be solved by mediating an application’s transaction content stream and applying automated analysis and decision criteria, linking to action capabilities (such as event triggering, content replication/transformation and routing – to name several) can be addressed.

FMT’s Application Mediation Platform enables rapid solutions for a wide variety of business challenges such as:

*Note: Information provided by FMT*

- Mobile gateway to create secure and trusted connections from your employees’ mobile devices to your internal applications
- Rapid integration with 3rd party APIs and other web data services to reduce cost and development effort
- Quickly achieve compliance to regulatory requirements without impacting your core applications
- Deliver IT security policy without impacting the business logic of your application
- A change delivery architectural component to assist with quality assurance and releasing change into your production environment
- An additional complementary layer of authentication to enhance token or other methods
- Protect email and CRM applications delivered via the web
- First party device recognition capabilities for enhancing the user experience
- Targeted content management without making back-end changes

More examples are available at <http://www.fmt.com>

### 3 Application Mediation in SOA Context

FMT's Application Mediation platform can be used as:

1. A tactical rapid response (yet strategically aligned) solution enabler
2. A complimentary and supplementary layer (capability) to the Enterprise Services Bus (ESB), within a Services Oriented Architecture.
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#### 3.1 Service Oriented Architecture (SOA) Definition

In this Paper, the term "SOA" is referenced. This following definition is provided for critical context.

Source [http://www.ibm.com/developerworks/webservices/library/ws-soa-enterprise1/?S\\_TACT=105AGX22&S\\_CMP=ISSUE](http://www.ibm.com/developerworks/webservices/library/ws-soa-enterprise1/?S_TACT=105AGX22&S_CMP=ISSUE)

Because IBM felt strongly about the relationship between SOA and the business objectives and goals of an enterprise, the IBM SOA Center of Excellence developed a definition of SOA that was coined to take that into consideration.

"A Service-Oriented Architecture is an enterprise-scale IT architecture for linking resources on demand. These resources are represented as business-aligned services that can participate and be composed in a value-net, enterprise, or line of business to fulfill business needs. The primary structuring element for SOA applications is a service as opposed to subsystems, systems, or components."

Recognising that SOA means many things based on your perspective, three definitions were introduced to address the business, architecture, and implementation perspective. These definitions are as follows:

##### **Business perspective definition:**

SOA is a set of services that a business wants to expose to its customers and partners or other portions of the organization.

##### **Architecture perspective definition:**

SOA is an architectural (design and construction) style that requires a service provider, requester, and a service description.

Set of architectural principles, patterns, and criteria, which address development and integration characteristics such as modularity, encapsulation, loose coupling, separation of concerns, reuse, composability and single implementation.

##### **Implementation perspective definition:**

SOA is a programming model complete with standards, tools, and technologies, such as Web Services.

A cohesive response to a Client's need is in the "Sum of the Parts" - in the context of end-to-end solution delivery and the convergence of Patterns, Models, Frameworks, Methods, Tooling and Run-time Software. This sets the scene for significant improvements in end-to-end solution delivery results and productivity.

IBM designs and builds these inter-related/dependent industry standards-based components to work as a cohesive and optimized whole for Business Transformation and Integrated Solution Delivery (incorporating ISV Packages and Existing IT Assets). At the heart of this are Service Oriented Architecture (SOA), Integrated Business Solutions and Model Driven Development.

IBM's "eco system" and Global expertise in this area, including its Institute of Business Value, R&D, Product & Service Divisions, client field expertise and learnings, solution laboratories, Centers of Excellence, Clients and Business Partners all continually feed into and enrich this approach to unified solution modeling, assembly, deployment and management.

### 3.2 Application Mediation in context of the SOA Solution Stack

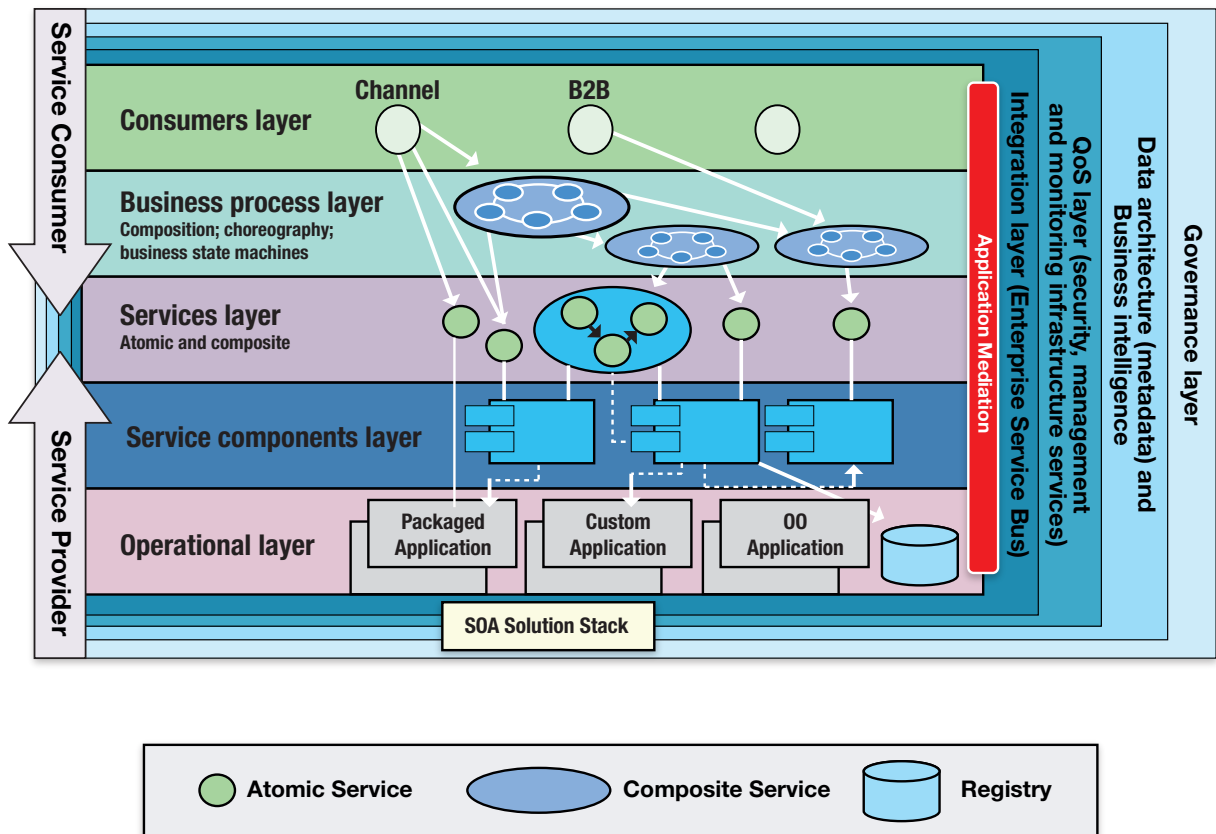


Figure 3 IBM SOA Solution Stack

In the above context Application Mediation can be used to provide rapid response to needs that may span the following layers:

- Consumers and Channels
- Business Processes
- Business Services
- Applications (ISV and Existing Assets)
- Integration (Legacy or an Enterprise Services Bus)
- Quality of Service (Security, Management, Monitoring)
- Data/Information / Business Analytics and Optimization
- Governance

### 3.3 Application Mediation in context of the SOA Reference Architecture

IBM has one open SOA Reference Architecture that its products (Software and Hardware – and acquisitions) and open Delivery Methods (and associated roadmaps) are continually aligned to – incorporating where and how the integration of ISV Software and Packages (and optimization with IBM Industry Framework Partners and Client’s Existing IT Assets) – all with the driver of realizing Integrated (end-to-end) Business Solutions (alignment of Business & IT) enabled by re-use and adaptability – to support Progressive Transformation with Return on Investment and mitigated risk.

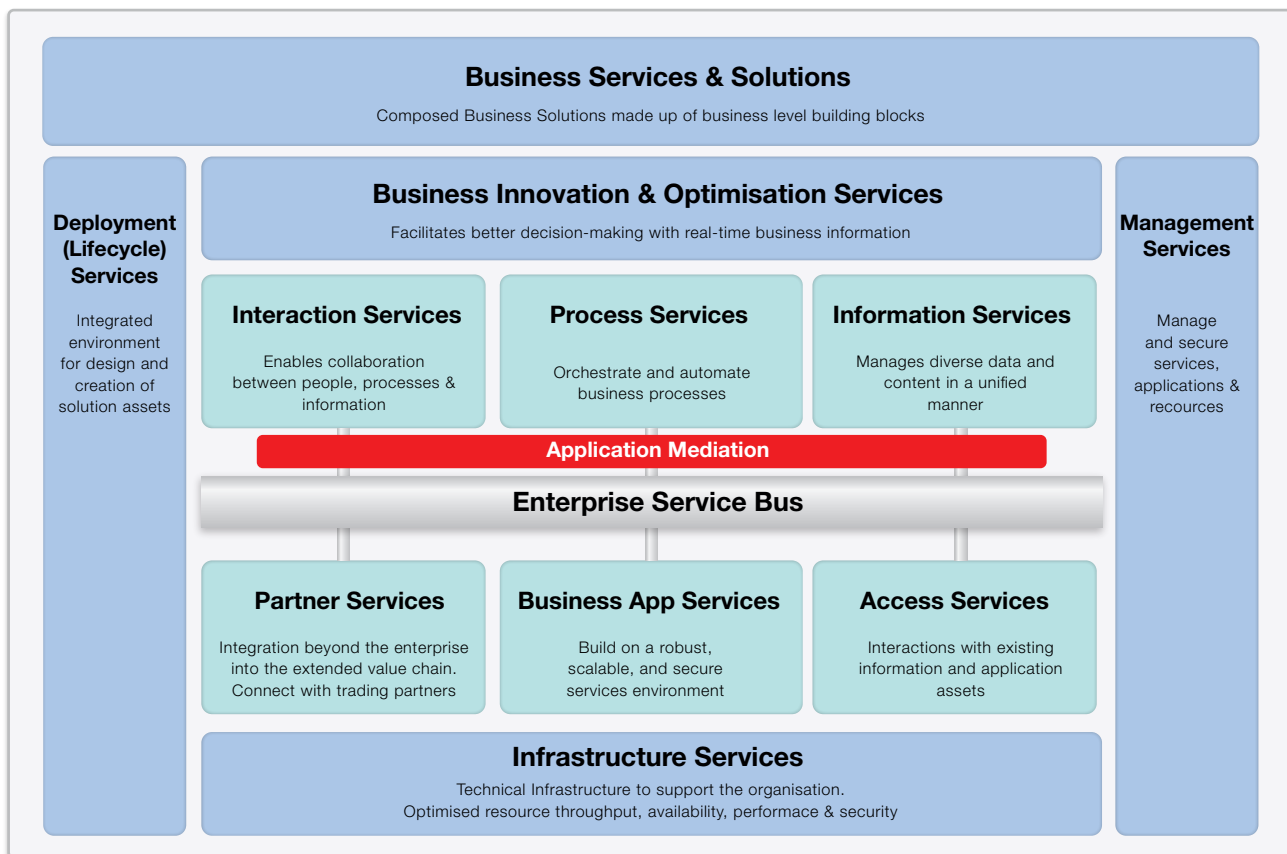


Figure 4 IBM SOA Reference Architecture

The following diagram shows an example application of the SOA Reference Architecture.

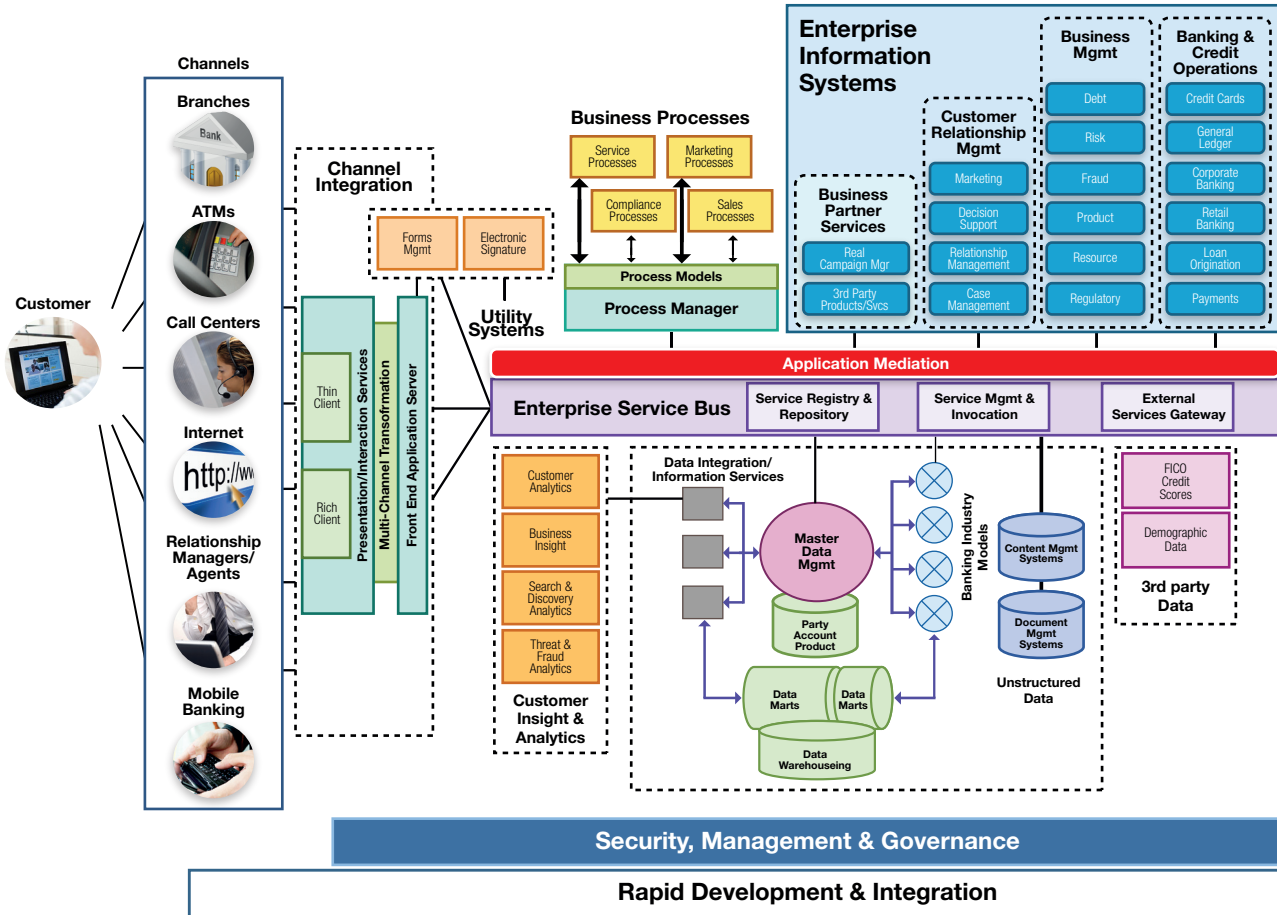


Figure 5 Illustrative Reference Architecture (showing SOA Patterns)

In the above context Application Mediation can be used to provide rapid response to needs that may span (and leverage) the entire environment – including Channels, Processes, Enterprise Information Systems, Customer Insight & Analytics, Data Integration/Information Services and Security, Management & Governance.



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