



FRESENIUS
MEDICAL CARE

INFORMATION TECHNOLOGIES GROUP

Mobile Application Development Framework

CONSISTENCY - COMMUNICATE - COORDINATE - COLLABORATE

INNOVATION CENTER

FEBRUARY 5, 2020

Agenda

- OBJECTIVE
- STRATEGY
- INTEGRATED MOBILE ARCHITECTURE
- BEST PRACTICES

Objective

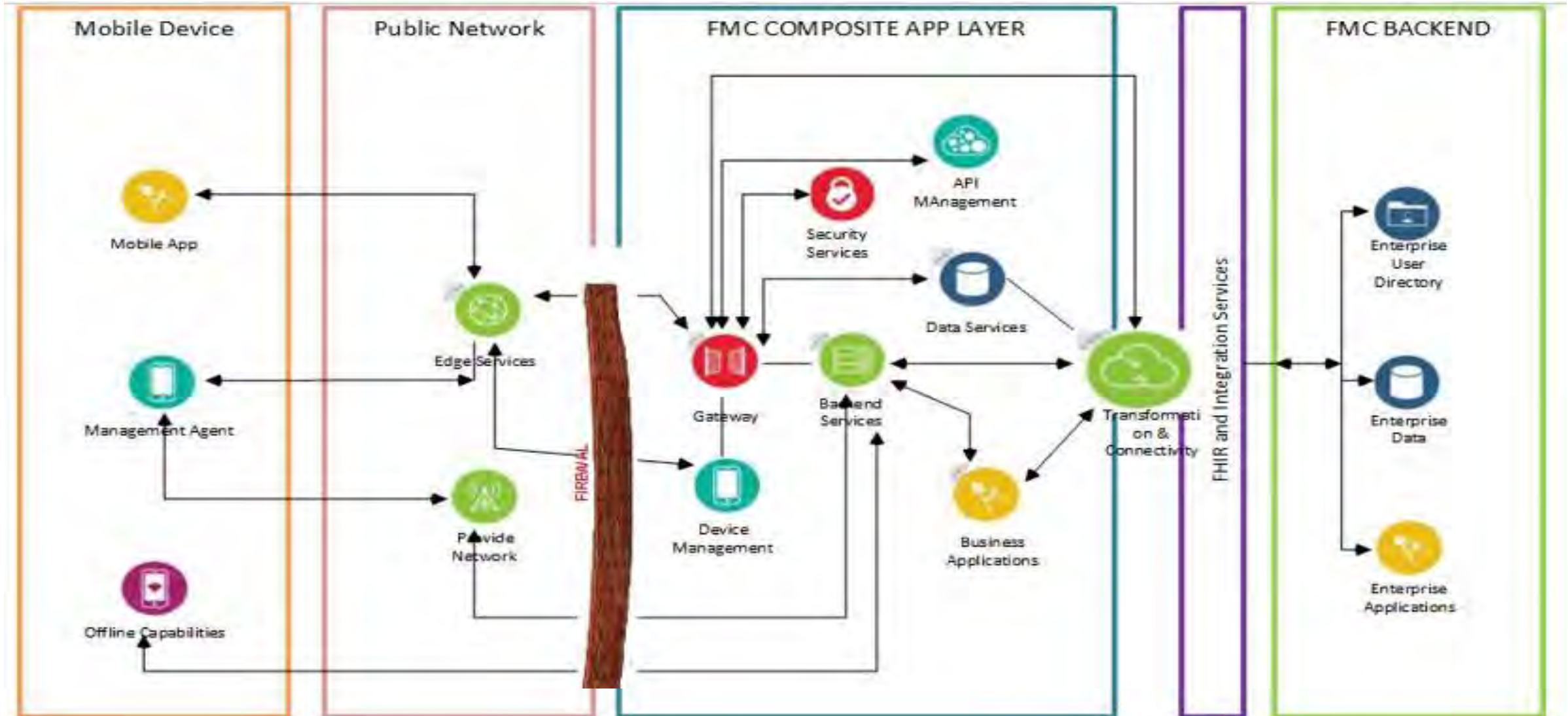
- Advancing FMC's technical practices
- Effective architecture/technology stewardship
- IT complexity reduction
- FMC operational excellence

Strategy

1. Engaged 4 vendors to learn the best practices
2. Extensive study of Gartner research materials on best practices
3. Engaged internal ITG/Acumen team leaders for individual workstreams
4. Conducted joint review sessions with all team leaders to arrive at common best practices
5. Documented and published the **MOBILE BEST PRACTICE STANDARDS**

Integrated Mobile Architecture

Mobile Architecture Blueprint Overview



Integrated Mobile Architecture

Mobile Client Blueprint Overview



Best Practices

Drivers

- Common, shared, proven architecture using standardized tools, technology, and technical support services
- An effective technical architecture supports business' ability to deliver enough value to users with reduced time to market
- Improve strategic and economic benefits to FMC
- Leverage current investments and assets
- Increase productivity and efficiency
- Improve decision-making
- Strengthen constituent goodwill and trust
- Improved customer service and cost savings
- Standard look and feel

Best Practices

Value

■ Provides the following mediation capabilities -

- Centrally apply security (encryption, authentication, & authorization) by leveraging Security Architecture
- Audit service requests/replies
- Data transformation
- Dynamic routing

■ Invokes and reuses shared services across the enterprise -

- Business logic is accessible at an enterprise level, rather than just the application level

■ Choreographs business flows across the enterprise

■ Standards-based - vendor neutral

Best Practices

Value

- **Provides consistent security services & configurations across FMC mobile application landscape**
 - Decrease security risks
 - Improves maintainability of systems
 - Offloads ad-hoc application security from application teams
- **Gives better service to our customers/partners -**
 - Simplified sign-on for mobile applications
 - Simplified registration/approval processing
 - Delegated administration
- **Promote enterprise security management -**
 - Consolidated security views and reporting
 - Flexibility to accommodate new or redeployed systems
 - Lowers security development and operational costs

Best Practices

Practice Areas

Practice Area	Leads
Product Management	Leslie Charette
Information Architecture	Kevin Jenkins, Radu, Kishor, Nitin Sane
Mobile Client Architecture	Kevin Jenkins, Radu, Kishor, Nitin Sane
Application Architecture	Kevin Jenkins, Radu, Kishor, Nitin Sane
Technology/Infrastructure Architecture	Mani Pani, Kevin Jenkins, Radu, Kishor, Nitin Sane
UI/UX	Dan Sloat
Quality Assurance	Medi, Brian Middlecoat
Security	James Dunham
DevOps	Mani Pani

Best Practices

Take Away

Leverage current investments and assets -

- Provides simplified, secure, and integrated access to FMC services and resource assets
- Facilitates an enterprise-wide perspective to planning, developing, and delivering mobile applications and supporting services
- Enables retro-fitting technology and design incrementally to modernize

Significant cost savings -

- Reduces hardware, software licensing, and support costs
- Ability to share highly skilled product specialists among multiple teams

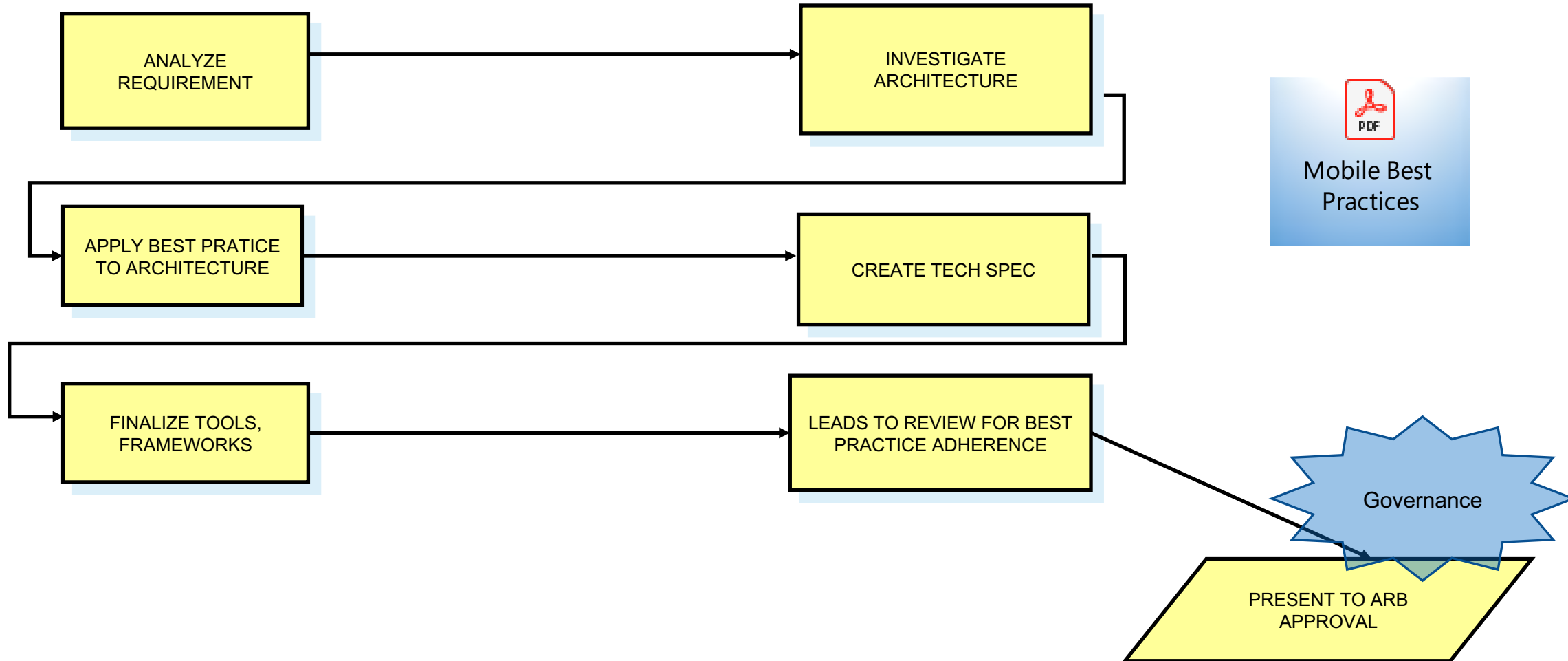
Improved application performance -

- Architecture can be easily scaled to meet capacity and performance requirements

Increase productivity and efficiency -

- Applications get “faster and smarter” by implementing best practices, common services, and lessons learned from previous projects

Going Forward Approach



Ask from you...

Study and Familiarize

- Evangelize it to your teams

Participate and Adhere

- Participate is all new/enhancement of mobile applications
- Provide feedback to constantly update best practices
- Participate quarterly to update best practices (A review committee will be established to keep best practices up-to-date)

Governance

- Every mobile application (new or enhancements) will be reviewed against the best practice's guidelines
- Technical leads will present the project architecture to ARB for approval
- ARB will use align to best practices as a criteria to approve the architecture

Thank you!

RAVI.PATIL@FMC-NA.COM