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Americas' SAP Users' Group

**Enabling Cross Platform Offline FIORI Architecture &
Case Example of Warehouse Material Scrapping**
Neeraj Sahu & Praveen Kumar, GyanSys

Session ID 83452

About the Speakers

Neeraj Sahu

- GyanSys, Account Executive
- Over 20 years in IT Leadership roles

Praveen Kumar

- GyanSys, SAP Architect
- Over 15 years in SAP

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Agenda

Introduction – Speakers & Company

Context and GyanSys Introduction

Enterprise Architecture Considerations

Defining Architecture for Online/Offline

Material Scrapping App – Case Study

SAP Mobility options

Best practices

Presentation Context and Goals

Complexity of transacting with SAP and the requirements to work from locations with no or intermittent network availability creates an opportunity to explore the SAP Mobile solutions.

This presentation focuses on architectural considerations, options and defining Fiori architecture for Cross Platform Offline enabled apps with ability to leverage device capabilities.

Learn:

1. Various approaches to evaluate and determine the best based on your organizational business needs and technology roadmap.

2. On-premise and cloud based options and execution approach for successful deployment

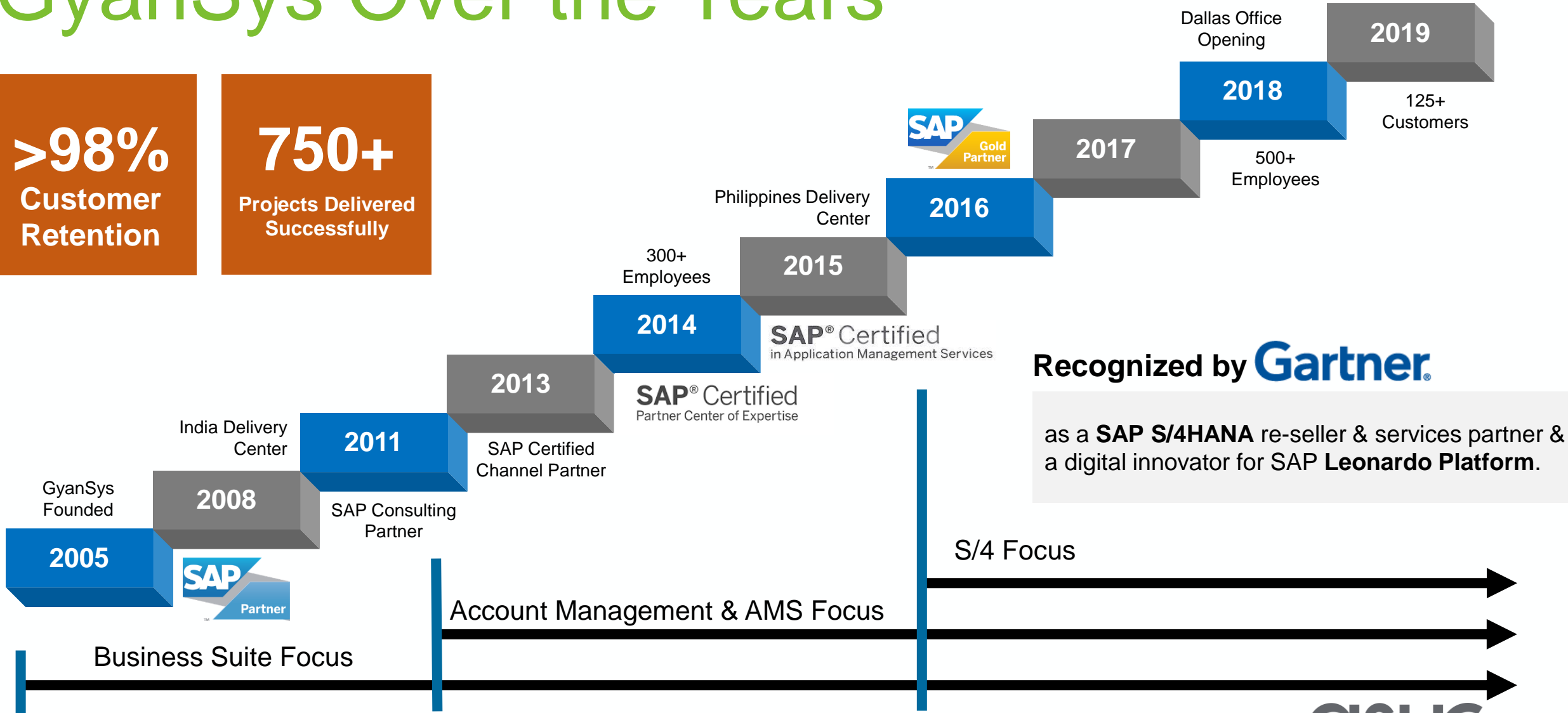Examples of Fiori apps implemented for GyanSys customers, challenges, and dos-&-don'ts.

Case Examples:

• Improved Productivity with Material Scrapping App

• Offline Enabled Order Placement App Leveraging SAP Fiori

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GyanSys Over the Years

> **98%** Customer Retention

750+ Projects Delivered Successfully

2005 — GyanSys Founded

SAP Partner

Business Suite Focus

2008 — India Delivery Center

SAP Consulting Partner

2011

SAP Certified Channel Partner

Account Management & AMS Focus

2013

SAP® Certified Partner Center of Expertise

2014 — 300+ Employees

SAP® Certified in Application Management Services

2015 — Philippines Delivery Center

2016

SAP Gold Partner

2017

S/4 Focus

2018 — Dallas Office Opening

500+ Employees

2019

125+ Customers

Recognized by Gartner

as a **SAP S/4HANA** re-seller & services partner & a digital innovator for SAP **Leonardo Platform**.

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GyanSys Global Footprint

GyanSys Team Mix:

US: **200+** | India: **350+**
Philippines: **25+** | Europe: **25+**

Latin/South America**: 10+**

SAP: **475+** | Microsoft: 25+
Salesforce: 50+ | Digital: 50+

Functional: 200+ | PMO: 50+
Technical: 300+ | Testing: 50+

Project: **65%** | Support: 35%

Turnover | US/Philippines: <5%
India: **<10%**

● **DELIVERY CENTERS**

● **PROJECT DELIVERY FOOTPRINT**

● **SALES OFFICE**

Global HQ & CoE: Indianapolis
Sales Office: Dallas

14+ Years of Organic Growth

600+ Full Time Consultants

125+ Customers Globally

Delivery Centers: Bengaluru, India Manila, Philippines

What We Do

Staff Aug.

Solution Assessments

Implementations

Support

Solution Assessments

- S/4 Speedy Assessment
- Analytics Assessment
- S/4 Best Practice Education Workshop
- Software BOM Analysis and Licenses Optimization
- Custom Code & Master Data Preparation

Discover & Preparation

- Business Transformation & ROI Analysis
- Project Rollout Planning and Gap Analysis
- Landscape Optimization and Cloud Strategy
- Proof-of-Concept (IBP, PLM, Hybris, etc.)

Explore	Realization	Deployment	Run
• Fit-to-Standard Approach • Fixed Price • Gap Analysis • US-based Solution Architect	• Technical Development • Configuration • Testing • Training Content Creation	• End User Training • Data Conversion • Manual and Automated Testing	• Knowledge Transfer to AMS • Hypercare Stabilization

Steady State AMS

- 24x7 Global Support Coverage
- Hybrid Model
- Primary and Secondary Named Resources For Each Skillset
- SLA-driven With Rewards & Penalties
- ITIL-driven Processes And Reporting

Enhancements & Run-the-Business

- Fixed Pool Hour Per Fiscal Year
- Carry Forward Hours During The Year
- Fixed Monthly Cost
- Shared Skillset and Resources
- Fixed Effort Per Enhancement and Delivery Accountability

(E2E) End-to-End

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India Delivery Center – Clients Supported

- Based out of **International Tech Park Bangalore (ITPB)**

- **Balanced mix** of employee for experience, industry and knowledge base.

- **People centric organization** with Investment in people growth, training, certifications and job satisfaction.

- **Knowledge Management Hub with Practice Leads based in Bangalore**

- **Delivery Process Control** with Delivery managers based in India.

- **Agile and flexible** org structure to enable team collaboration and customer responsiveness.

- **Global exposure** for the employees with experience working internationally is US, Europe

- Technical Skills with continuous inhouse and external **Certifications**.

- WIFI Enabled 500 seating capacity

- Strong Security and confidentiality

- Secured ODC with Badged Access for specific clients

- Advanced dedicated Conferencing facilities.

Shared Vision : Interactions with Customers

Remo Schneider (dormakaba VP of Business Application) with GyanSys Team in Bangalore
Testimonial :
https://www.linkedin.com/feed/update/urn:li:activity:648710855378 9227008/

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Our HANA Practice Snapshot

4 Greenfield Implementations	**4** HANA Technical Migrations	**8** S/4HANA Assessments & Value Discovery Engagements
1 Central Finance	**5** BW/4HANA / BW on HANA Engagements	**7** S/4HANA Support Engagements

SAP presented HANA Innovation Award

300+ SAP S/4HANA Certified Consultants

20+ HANA Engagements

Tools

- S/4 Code Remediation
- S/4 Security Role Correction
- Easy EDI Integrator
- EDI Error Remediation Tools
- S/4 to Salesforce Integrator
- S/4HANA Interface Monitoring Tool
- Business Partner Upload
- Pricing Condition Data Load
- Forms Catalog

Lessons Learned

- CDS View
- Fiori Rollout Impact Assessment
- Classic GL to Universal Ledger
- Vistex vs. Settlement Management
- Fixed Asset Migration
- Foreign Trade in SD vs. GTS
- Infrastructure Sizing
- Middleware Integration
- MRP Live

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Our Analytics Practice Snapshot

Service Offerings
- ❑ BW/4HANA Implementation, BW & BO AMS & Upgrade,
- ❑ Data Integration (ETL), Data management & governance
- ❑ Dashboards, Predictive Analytics, Self Service BI solutions
- ❑ BW on HANA migration, Performance-tuning
- ❑ Big Data Advisory, Strategy and Roadmap

Experience
- ❑ Certified Consultants in multiple Analytics areas including BW, HANA, R language, Predictive Analytics.
- ❑ Professionals with experience ranging from 16+ years to junior resources.
- ❑ Implementation and AMS engagements.
- ❑ Global Team of 100+

3	5	5
BW/4HANA Engagements	**BW on HANA Engagements**	**Power BI, QlikView, Tableau**

5	3	**Technologies**
Big Data / Machine Learning (ML)	**Master Data Governance (MDG) / Data Services**	hadoop · SAP BW/4HANA · SAP Lumira · SAP Data Services · SAP · crystal reports · SAP Business Objects · tableau · SAP S/4 HANA · Qlik Q

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Our Supply Chain Practice Snapshot

Service Offerings
- ❑ Sales & Operations Planning and Detailed Scheduling
- ❑ Manufacturing Execution
- ❑ Digital Manufacturing Insights and Industrial IoT (IIoT)
- ❑ Inventory Modelling and Deployment Strategy

Experience
- ❑ **Implementation (85%) and AMS engagements (15%)**
- ❑ **14 year practice history**
- ❑ **450+ direct engagements**
- ❑ **Current global team of 150+ (US: 60% | offshore: 40%)**

4 **Planning**	**5** **Warehouse Management**	**8** **PP/DS/QM**
20 **Engineering**	**6** **MII/MES**	**12** **Procurement**

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Integration Practice Snapshot

Service Offerings
- ❑ Integration of SAP Products
- ❑ Integration with Non SAP Products
- ❑ HCI and PO Expertise

Experience
- ❑ **20+ direct engagements**
- ❑ **Current global team of 100+ (US: 40% | offshore: 60%)**

5	**5**	**3**
Fiori	**Integration (HCI / PO)**	**SAP Cloud Platform**

Cloud Product Integration
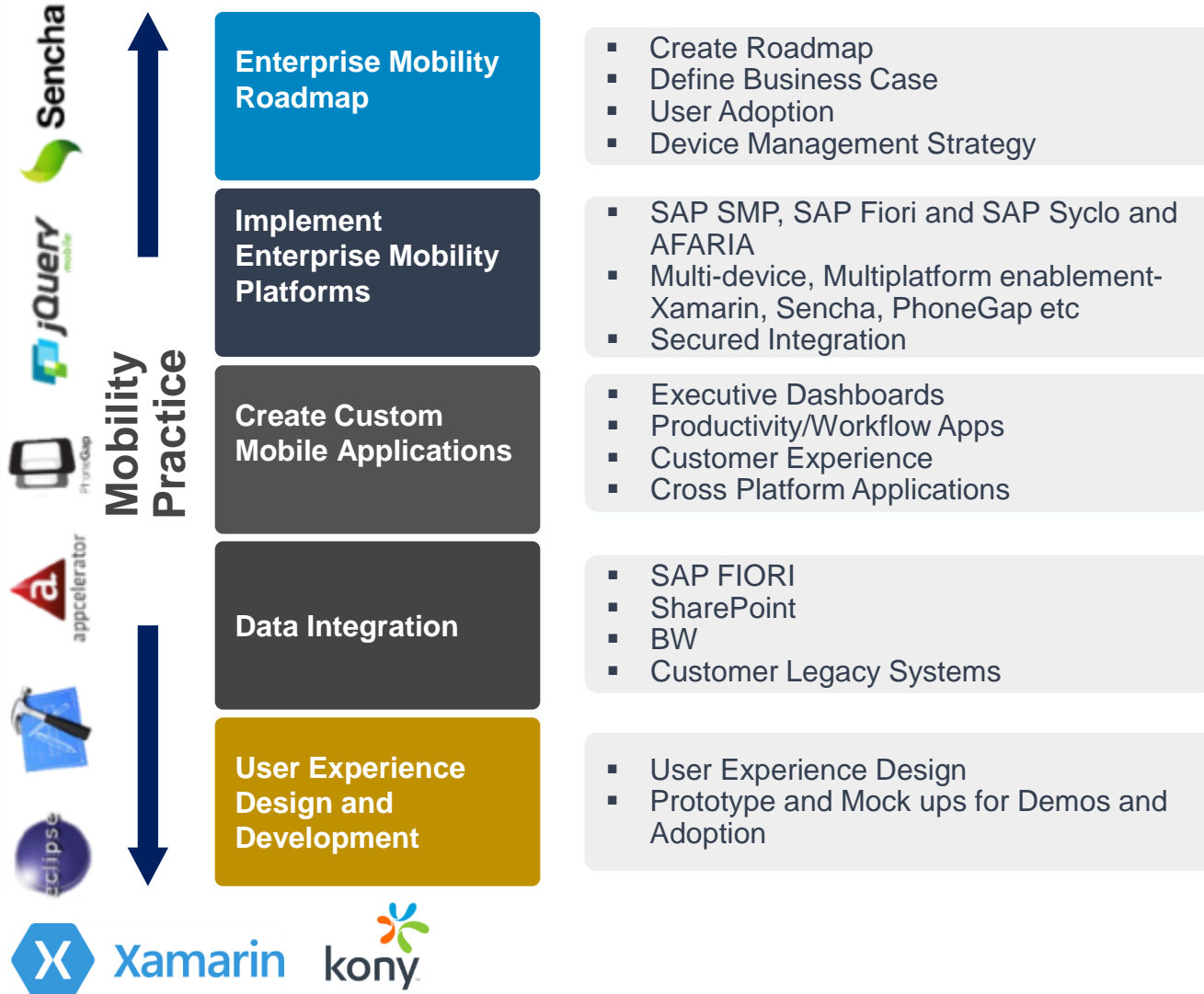
workday · salesforce · servicenow · SAP Ariba · DocuSign

SAP SuccessFactors · SAP Concur · SAP Analytics Cloud

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Mobility Practice

Mobility Practice

Enterprise Mobility Roadmap	▪ Create Roadmap ▪ Define Business Case ▪ User Adoption ▪ Device Management Strategy
Implement Enterprise Mobility Platforms	▪ SAP SMP, SAP Fiori and SAP Syclo and AFARIA ▪ Multi-device, Multiplatform enablement-Xamarin, Sencha, PhoneGap etc ▪ Secured Integration
Create Custom Mobile Applications	▪ Executive Dashboards ▪ Productivity/Workflow Apps ▪ Customer Experience ▪ Cross Platform Applications
Data Integration	▪ SAP FIORI ▪ SharePoint ▪ BW ▪ Customer Legacy Systems
User Experience Design and Development	▪ User Experience Design ▪ Prototype and Mock ups for Demos and Adoption

30+ Team Members

25+ Accelerators

50+ Custom Applications

Technology

HTML5   JSON
Native iOS   jQuery
SAP NetWeaver Web Services

Salesforce Practice Snapshot

3 Sales Cloud	**3** Service Cloud	**2** Marketing Cloud
3 Community Cloud	**3** SAP + Salesforce Integration	**3** Lightning + Force.com Development

salesforce **silver consulting partner**

9.62/10 CSAT Score

Practice Overview

- ✓ **50+** Salesforce Consultants. (10+ US , 40+ India)
- ✓ **Flexible engagement** model with **24x7** support across all time zones
- ✓ **Pooled hour support model** with carry forward hours in a quarter
- ✓ Experience in implementing CPQ & Quote-to Cash Application

- ✓ Pre-delivered components & **Accelerators** for Lightning Migration
  - ✓ Sales Cloud Accelerator
  - ✓ Lightning Accelerator
  - ✓ SAP Integrator Accelerator
  - ✓ GyanSys Tool Repository
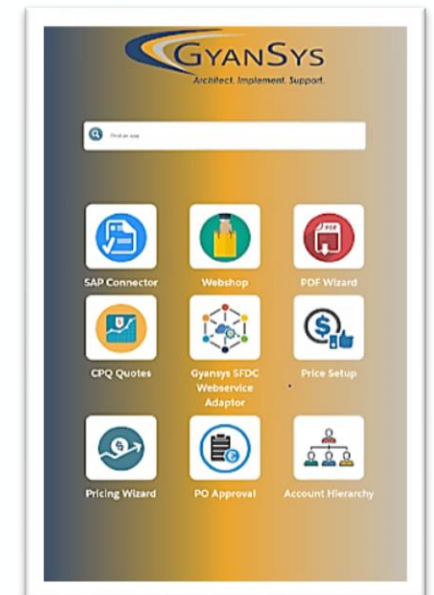
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AMS Practice Snapshot

Services Overview
- **SAP OSS support for customers <$1B revenue**
- **Tools & Accelerators** to effectively manage support operations
- **KPI Driven** with penalty / reward and annual review of terms

Hybrid resource model –
- Named **primary & secondary** resources for key functional areas
- **Pooled** hours model across multiple skill sets
- **Carry forward** hours within a quarter

225+ Experienced Consultants	**35%** Revenue from AMS	**24/7** Global Support Coverage	**35+** Customers on AMS Model

SAP® Certified
in Application Management Services

SAP® Certified
Partner Center of Expertise

9 Hybrid – Dedicated & Pooled Support	**18** Pooled Support	**10** Dedicated Resources Support

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SAP UX Direction
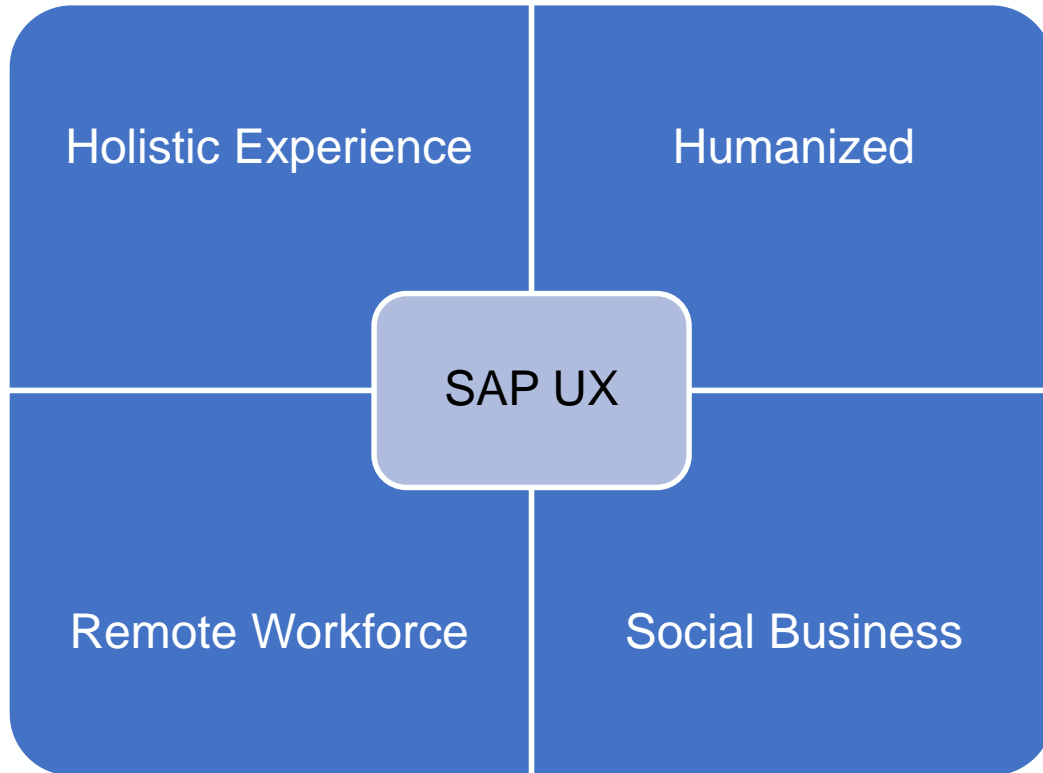
User Experience for Remote Workforce

- Freedom to use any mobile platform (iOS/Android/Windows)

- Capability to work in offline mode or intermittent loss of connection

- Capability to Scan 2D, 3D barcode or QR code.

- DATA synchronization with SAP without manual interaction.

- Use of a Camera to capture Images for SAP Transactions

- Push Notification on the mobile device
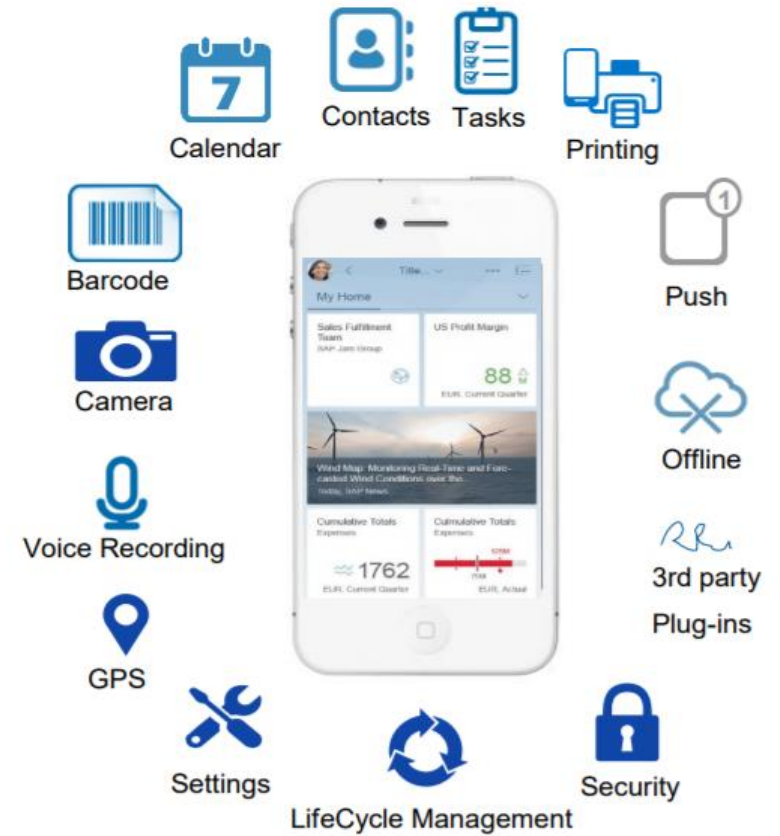
SCP Mobile Services Architecture

internet

On-demand

On-premise

Hybrid/Native Apps

SCP Mobile Services

SAP Cloud Platform

SAP S/4HANA Public Cloud

SAP Cloud Connector

SAP NetWeaver Gateway

SAP S/4HANA

SAP ECC or SOH
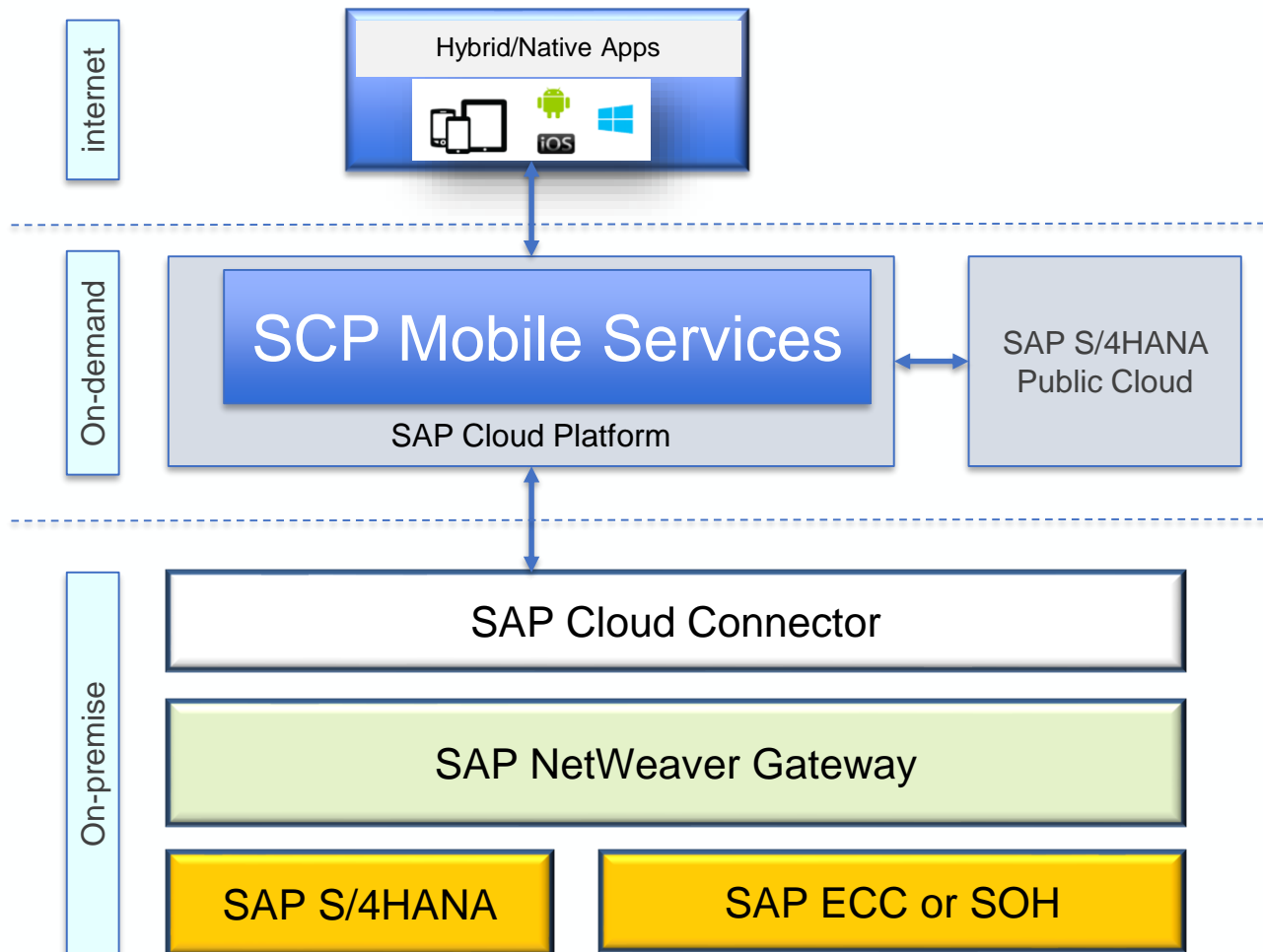
Challenges Addressed:

- Time required for on-premise mobile platform setup and Maintenance

- Effort in DMZ setup and Maintenance

- Server outage due to incorrect sizing

- Load Balancing and increase in user load

- Data security for Offline Storage

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FIORI transformation to Hybrid App

Web App

Hybrid Mobile App

Calendar Contacts Tasks Printing
Barcode Camera Voice Recording GPS Settings LifeCycle Management Security Push Offline 3rd party Plug-ins

My Home

Sales Fulfillment Team
SAP Jam Group

US Profit Margin
88
EUR, Current Quarter

Wind Map: Monitoring Real-Time and Forecasted Wind Conditions over the...
Today, SAP News

Cumulative Totals
Expenses
1762
EUR, Current Quarter

Cumulative Totals
Expenses
EUR, Actual

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SAP Mobile Solution Options

Mobile Card
- Create card from FIORI App
- Push Notification
- iPhone Features
- Offline
- Interaction

Mobile Development Kit
- Quick App development
- Cross Platform
- Offline Capabilities
- Central Lifecycle Management

FIORI WebApp
- Application for Fiori client or Browsers
- Adapt device orientation and form factors

Hybrid Apps
- Cross Platform Apps
- Uses Mobile native capabilities
- Development extended to All Platform

Native Apps
- Platform Dependent App
- Uses all Mobile capabilities
- Provide best performance

SAP Mobile App Evaluation Matrix

Mobility Options\Features	Cross Platform	Native look-and-feel	Offline	Performance	Capabilities	Time to Market
Mobile Card	++	++	++	++	-	++
Mobile Development Kit	++	++	++	++	+	+
Web App	++	--	--	--	--	o
FIORI Client	++	--	--	-	+	o
Packaged Hybrid App	++	--	++	-	+	-
Native App	--	++	++	++	++	--

S/4 Cloud Custom Development options

SAP S/4HANA Cloud
- In-App and Classic Extension
- UI
- Application
- Database

UI Integration
Open API
Business Events
View Replication

SAP Cloud Platform
- FIORI UI
- Application (S4 SDK)
- HANA Database

SAP Identity Management

SAP Public Cloud
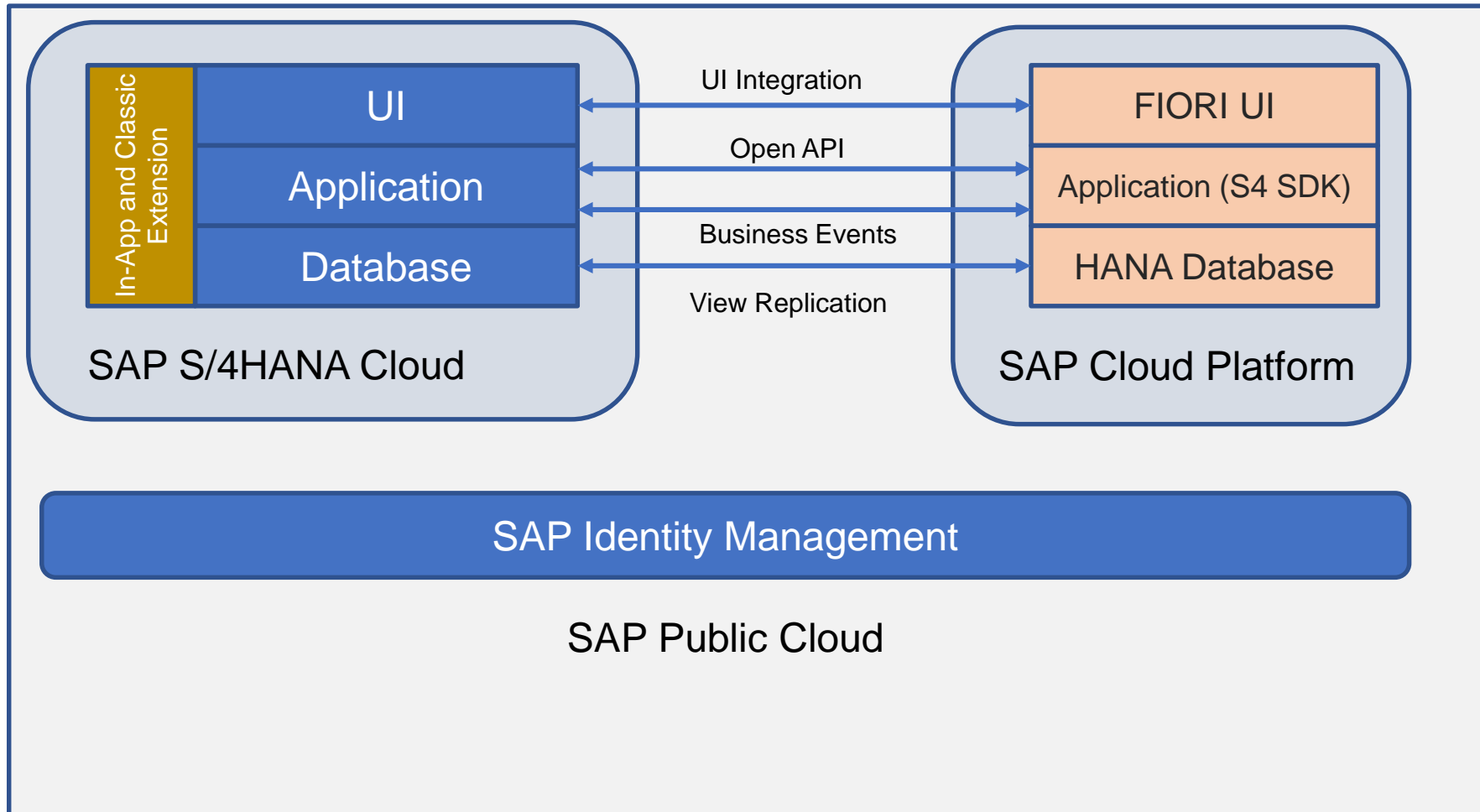
Side-by-side Extensions: Custom Development on S/4HANA is done using Side-by-side Approach

- We can use SAP Cloud Platform Cloud Foundry or Neo Environment.

- App will be build with FIORI UI principles and accessible from S/4HANA Cloud FIORI Launchpad

- Custom App will open API and custom CDS view in S/4HANA cloud system.

- Identity provider setup is mandatory requirement for this approach.

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Material Scrapping App Requirements

- Material Scrapping Apps should work on iOS, Android, and Windows with SAP ECC or S/4HANA backend

- Adapt to Phone orientation and form factors

- Works on Offline mode or with Intermittent loss of network

- Captures 1D, 2D barcode and QR codes

- Global Rollout ready with configuration based on Plant, Storage location, Storage bin, etc.

- Data and Field validation on Offline mode

- Auto synchronization on data with SAP Backend

- Role based access for User and Admin

Project Benefits

- First FIORI project
- Multiple Warehouses
- Different Device Preferences across continents
- Quick training & onboarding effort for new staff.
- Flexibility to operate from remote locations and from cleanrooms with no loss of activity.
- Faster re-processing of errors due to built-in error handling features
- Supervisor Dashboard
- 6-8 times productivity gains

"We were able to install the mobile app on the Samsung tablets this evening and executed online and offline scrapping transactions with success. Additionally, we installed the Windows build on one of the supervisor's workstations in less than one minute with success! I appreciate all the hard work by GyanSys and my team to get to this point."

- Application Manager

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Application Architecture
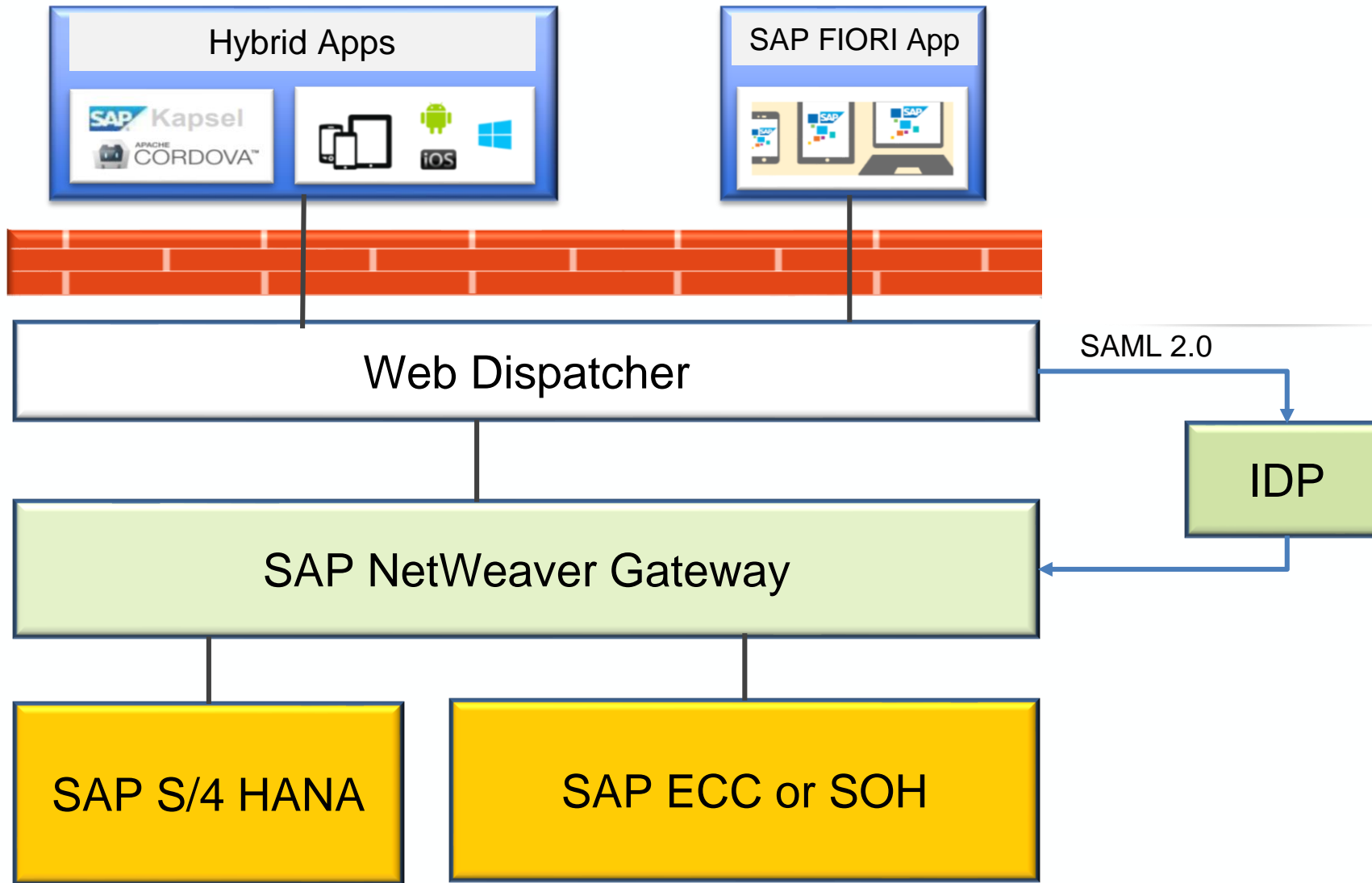
App Login Screen

App Scrapping Transaction
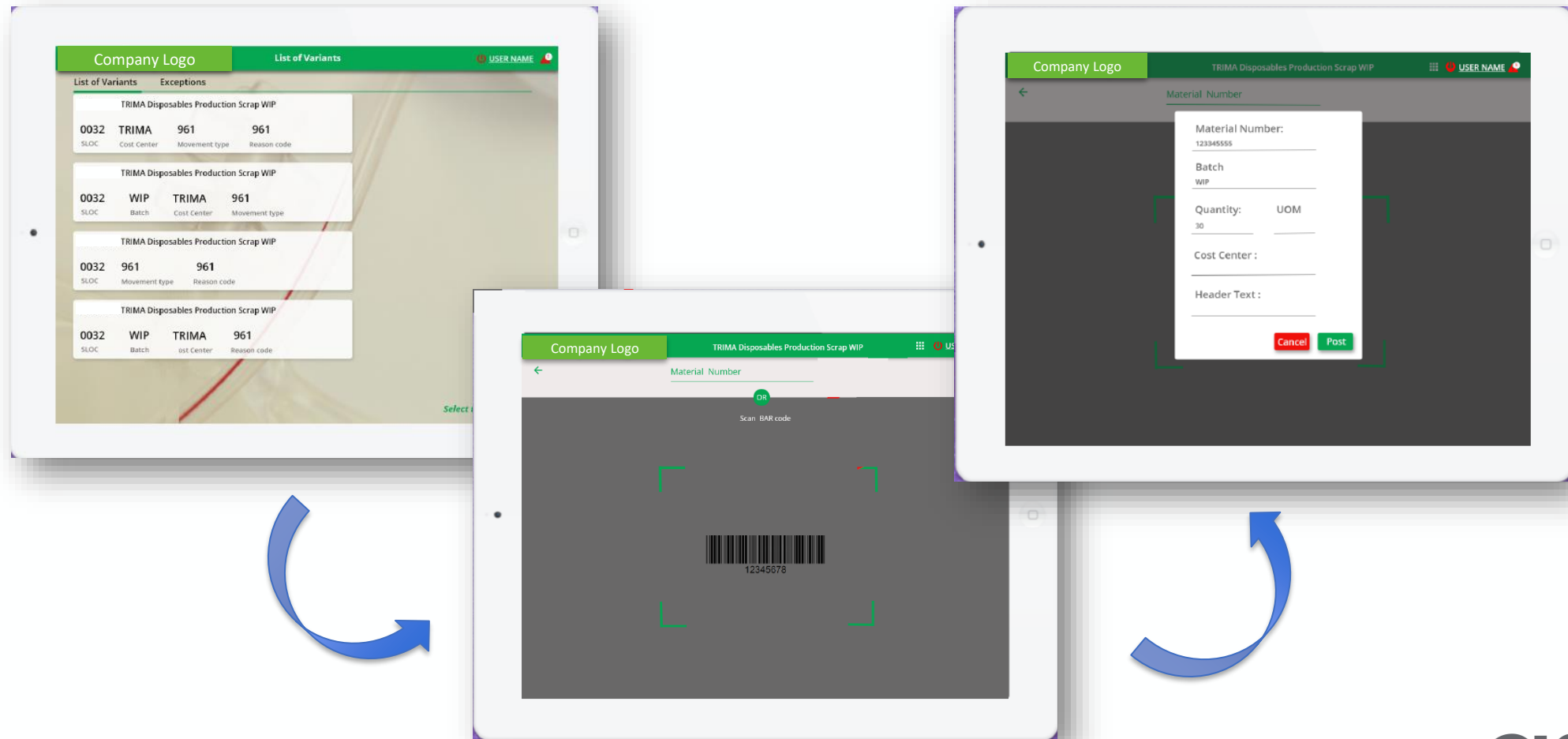
Offline Data and Admin screen
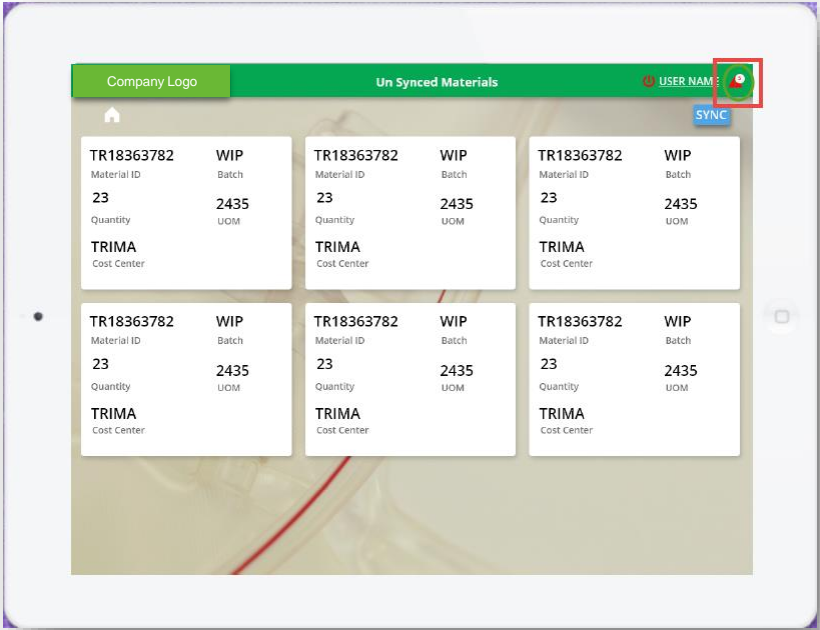
Offline Transaction
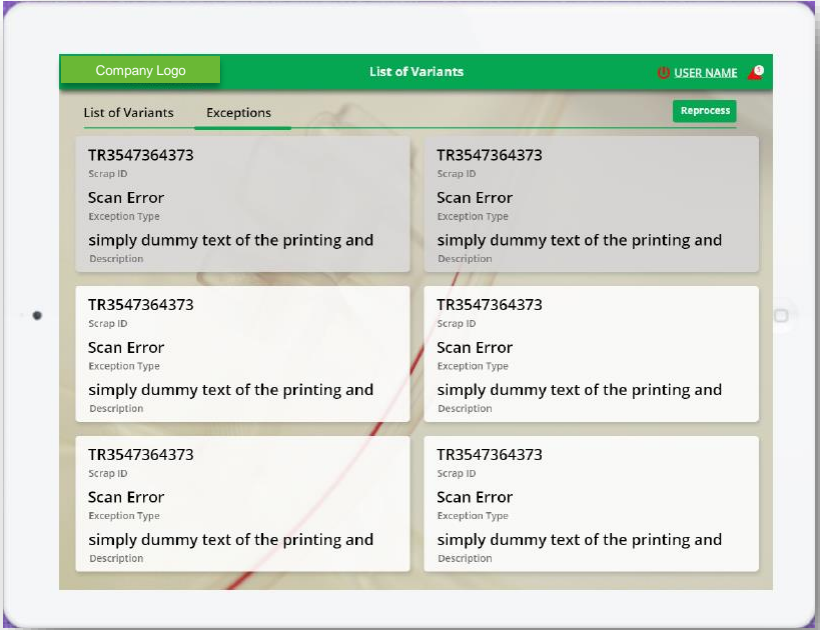
Admin Screen

FIORI App Development Methodologies

Discover › **Define** ›

Design | Implement
Quality Testing

› **Deploy** › **Measure**
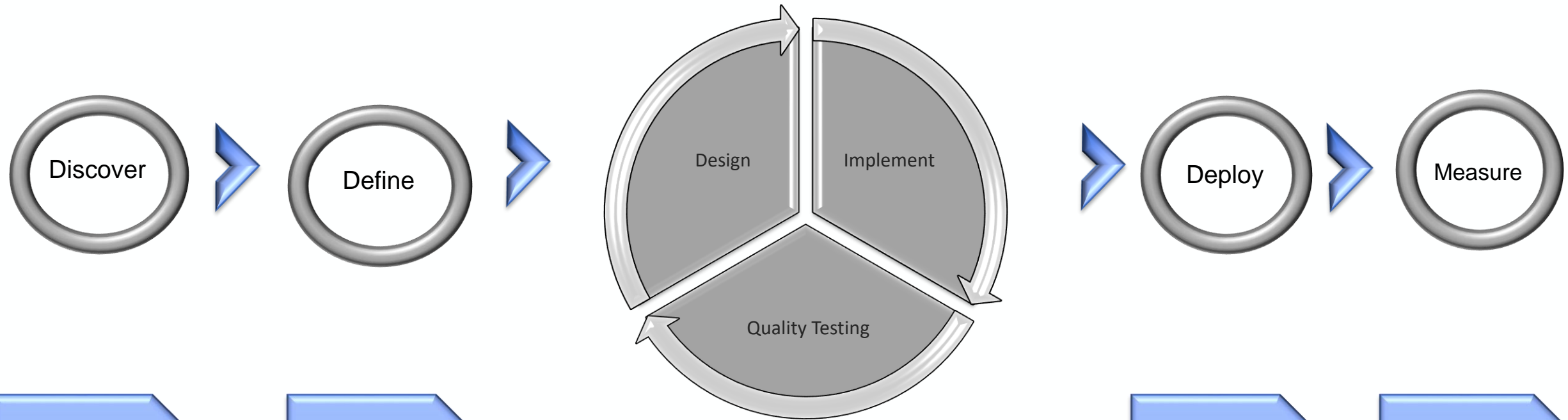
We Listen To Your Needs And Collaboratively Define The Role

We Brainstorm And Inject Your Brand Into The Napkin Sketch

- UI Design Proposal Based On Demand
- Developers Build Application As Defined
- Rigorous Testing To Insure The App Meets All Requirement And Standard

Execute UAT And Deploy Solution To Production On Approval

Review User Feedback And Measure Performance

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Leading Oil Transportation Provider

Company Background
- Leading transporter of fuel, lubricants, chemicals
- Revenue size ~$1 Billion USD
- Headquarters: Fort Worth, Texas
- Employee Size: 1,700
- Operates in 23 states, Customer base: Energy, Marine, Mining and Industrial market

Customer Order Entry App
- Mobile / Offline
Inventory Checks
- *Real time Pricing*
- *Routing to right distribution center/Storage*
- *Delivery Time Commitment*

Business Challenge

- Needed a cost effective, simple, intuitive order entry tool for customer
- Existing order entry tool in SFDC has integration issues
- CSRs also needed an easy tool for order entry than SAP

Solution Detail

- Custom FIORI app built to make order entry simple like Jimmy Johns App
- Hub Architecture for FIORI deployment with O-Data service defined in Frontend
- Backend – ECC 6.0 EHP4
- User Base- 5000
- Only Frontend server hosts the user base

Project Detail

- Project Team Size: 6
- Resource Mix: ABAP, UI5 ,OData
- 3 phase implementation
- Phase 1
  - Duration – 12 weeks
  - Go-live – 6th Feb
- Phase 2 starts from 18th Feb

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Solution Snapshots

Take the Session Survey.

We want to hear from you! Be sure to complete the session evaluation on the SAPPHIRE NOW and ASUG Annual Conference mobile app.

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:
http://info.asug.com/2019-ac-slides

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Q&A

For questions after this session, contact us at
neeraj.sahu@gyansys.com

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