SAP HCP
Using HCP for Mobile Apps

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# SAP HCP – Webinar Series 4 SAP User Groups

Moderator: Jos Houben		
SAP HCP Digital Future Enabled by SAP HANA Cloud Platform	Prakash Darji	Mar 17
SAP HCP and HEC: How they compare and combine	Uddhav Gupta / Maria Yu	Mar 29
Building new Analytical Solutions on HCP	Jana Richter	Apr 4
Building Cloud extensions with HCP	Filip Misovski	Apr 6
Building on-premise extensions on HCP	Bertram Ganz	Apr 12
SAP HCP – Using HCP for Mobile Apps	**Dirk Olderdissen**	**Apr 14**
SAP HCP – Addressing Security Concerns	Martin Raepple	Apr 19

Agenda

- Hana Cloud Platform
  - Usage scenarios
  - Mobile application types

- SAP Mobile Platform

- SAP Mobile SDK

# Hana Cloud Platform
## - Integrate, extend and build
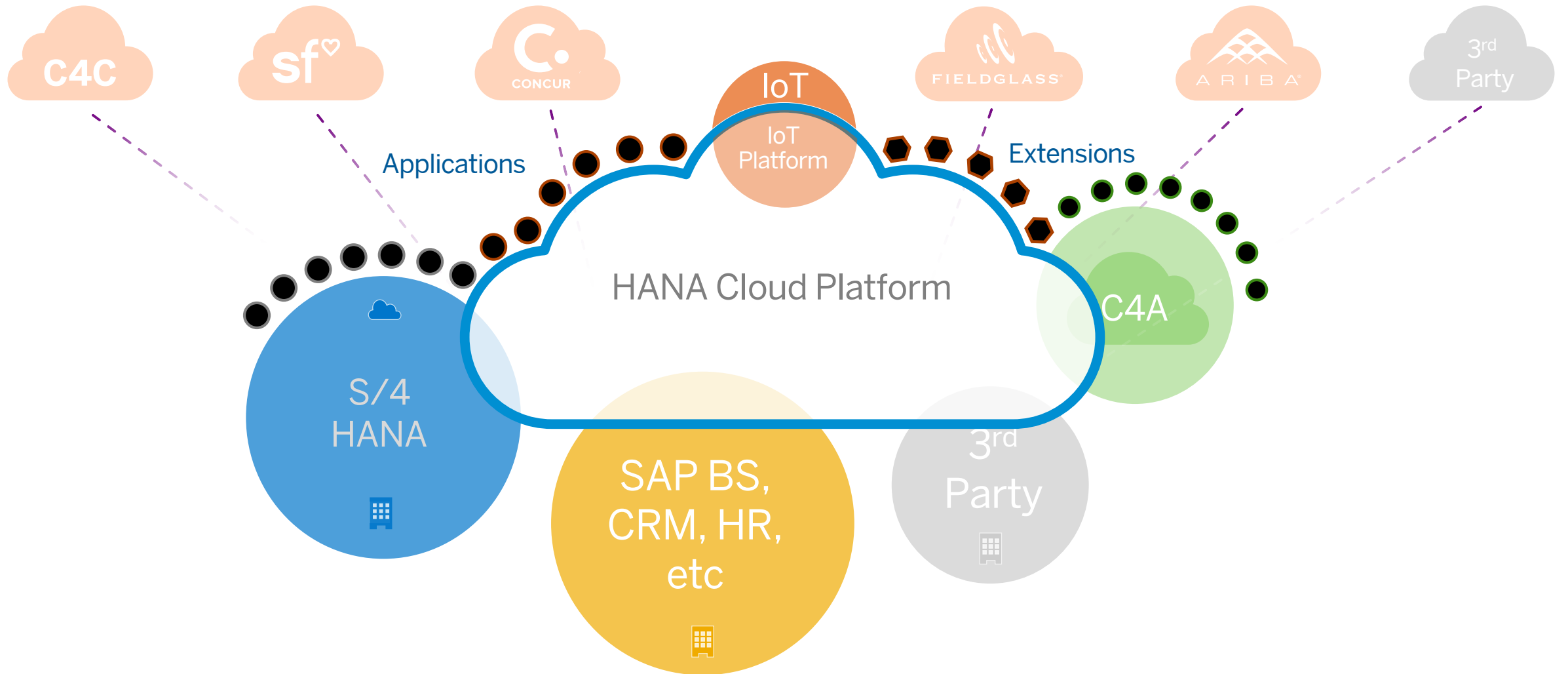
Usage scenarios
- Externalize on-premise applications

One major part of integrating and extending applications is the externalization.

- **Traditional on-premise systems**
  - Externalize using middleware and proxy

- **Hana Cloud Platform**
  - Externalize using Hana Cloud Connector
    - Outbound encrypted connection
    - Individual, configurable, app specific connections
    - Additional security and authentication options

Proxy

SMP3

ECC   CRM   HCM

HANA Cloud Platform

HANA Cloud Connector

ECC   CRM   HCM
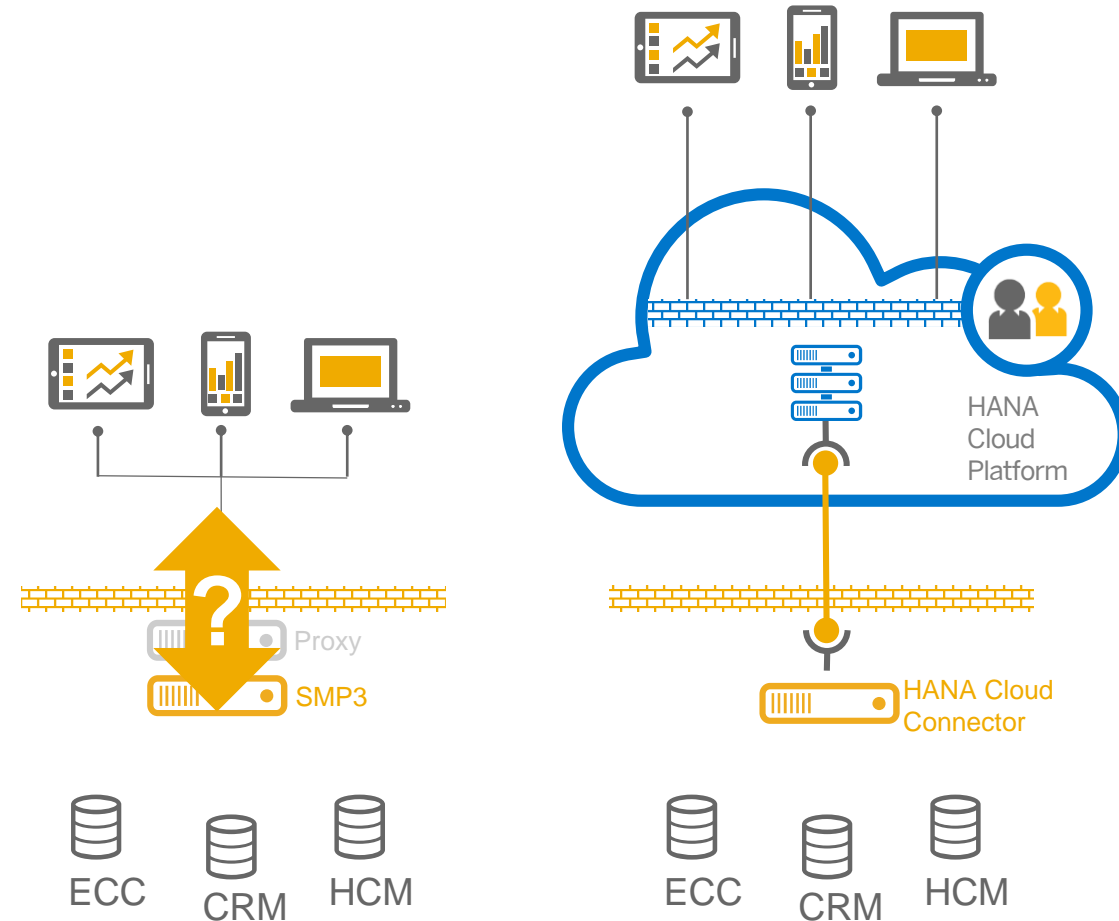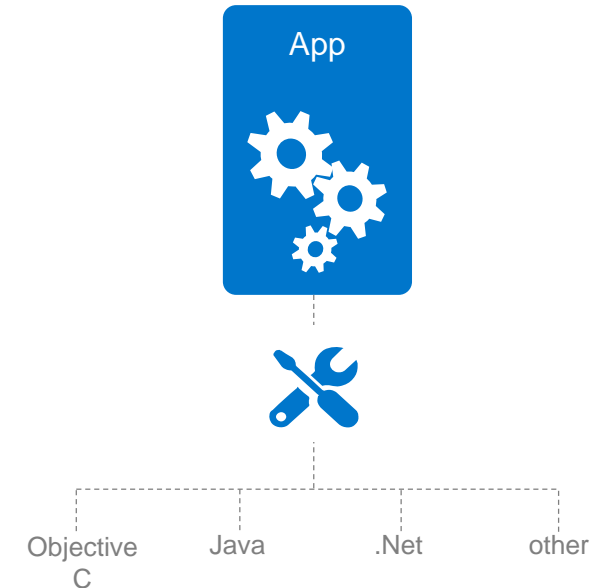
Mobile application types
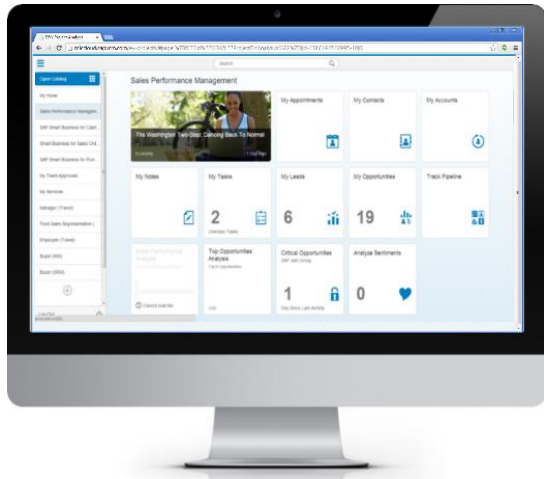
Web App

- HTML5 + adaptive design

Hybrid Mobile App

- HTML5 inside a native wrapper
- Apache Cordova

Native App

- Development in device specific, native programming languages
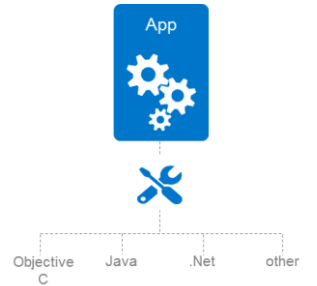- Code specific to Device OS

Mobile application types
- differentiation

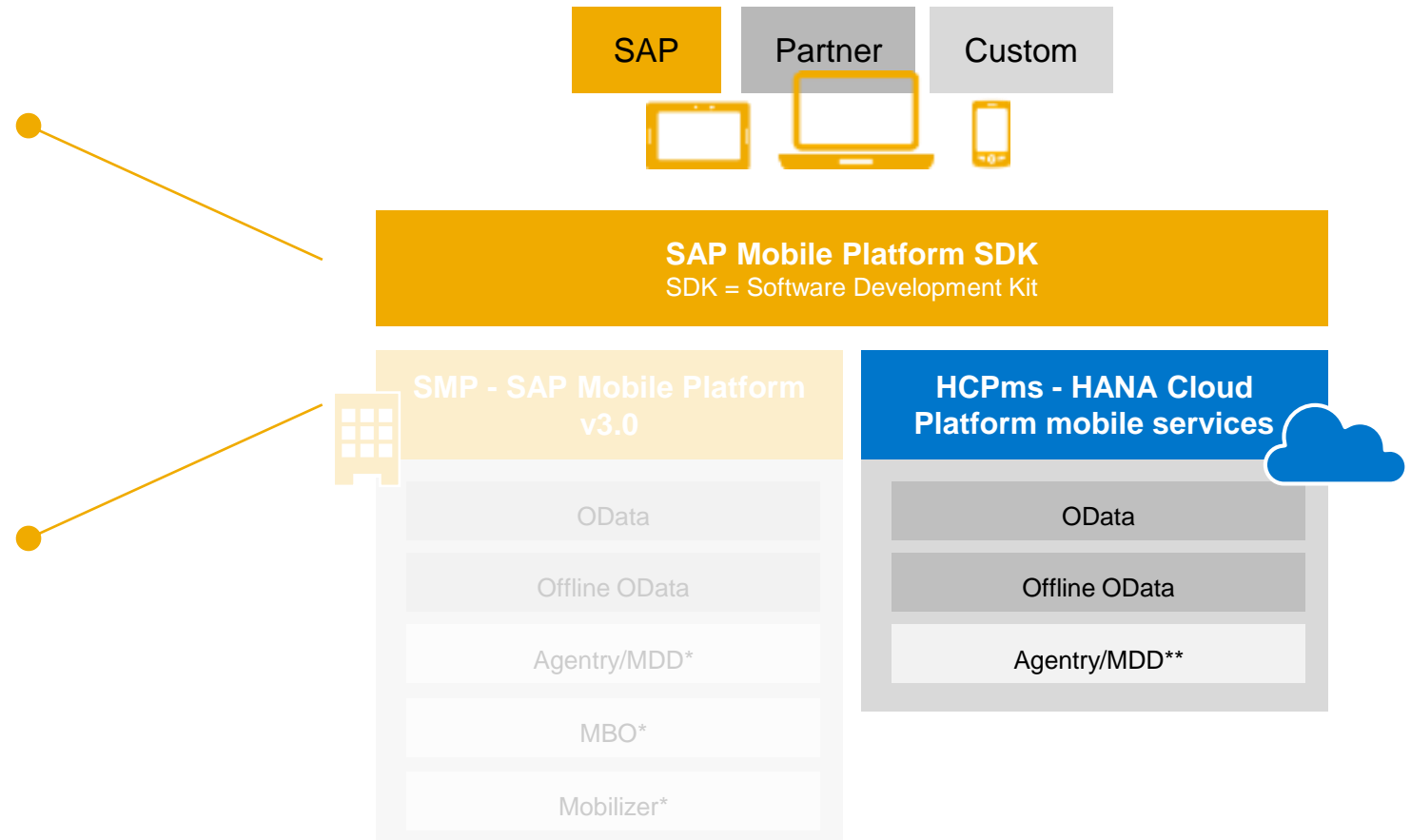|	Web App	Hybrid Mobile App	Native App
Browser	●	◔	◔
Native device functions	○	◑	●
Security options	◔	◑	●
Offline capable	○	◑	●
Push capable	○	◑	●
Governance	◔	◑	●
Mobile capabilities	◔	◑	●

This is an illustration only. The suitability of each application type is subject to indivudual project considerations.

SAP Mobile Platform

SAP Mobile Platform

- **Develop apps**
  - Hybrid (HTML5-Cordova)
  - Native
  - Meta Data Driven apps (Agentry)*
  - Online / offline, push, …

- **Run applications**
  - SAP Fiori Mobile (e.g. My Inbox)
  - Custom apps
  - Mobile qualities
  - Manage, secure, report, …

SAP	Partner	Custom

SAP Mobile Platform SDK
SDK = Software Development Kit

SMP - SAP Mobile Platform v3.0	HCPms - HANA Cloud Platform mobile services
OData	OData
Offline OData	Offline OData
Agentry/MDD*	Agentry/MDD**
MBO*	
Mobilizer*	

*Apps based on SMP 2.3 or older versions may require some changes to run on SMP 3.0
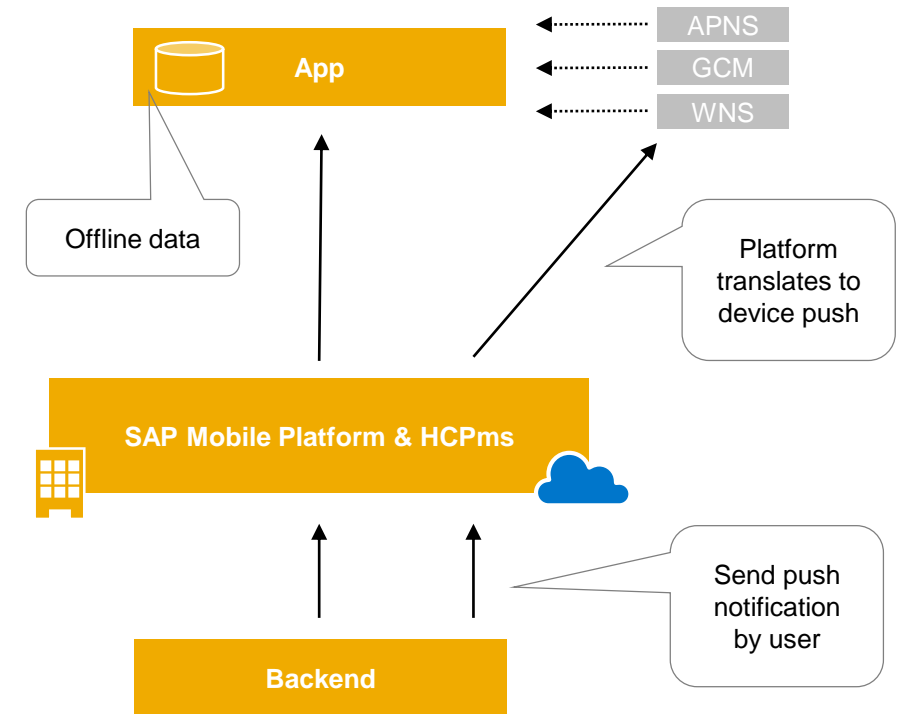
Mobile Platform
- Offline and Push

OData Offline capabilites

- Offline apps with Hybrid SDK and native SDK
- Also for SAP Fiori

Push support

- Native notification integration (APNS, GCM, WNS)
- Back end system can send PUSH notifications easily

App

APNS
GCM
WNS

Offline data

Platform translates to device push

SAP Mobile Platform & HCPms

Backend

Send push notification by user

Mobile Platform
- Application management

Application registration

- Every app on every device can be uniquely identified
- Enables Push notifications

App usage and versions

- What app version are in the field on which devices
- Number of connections
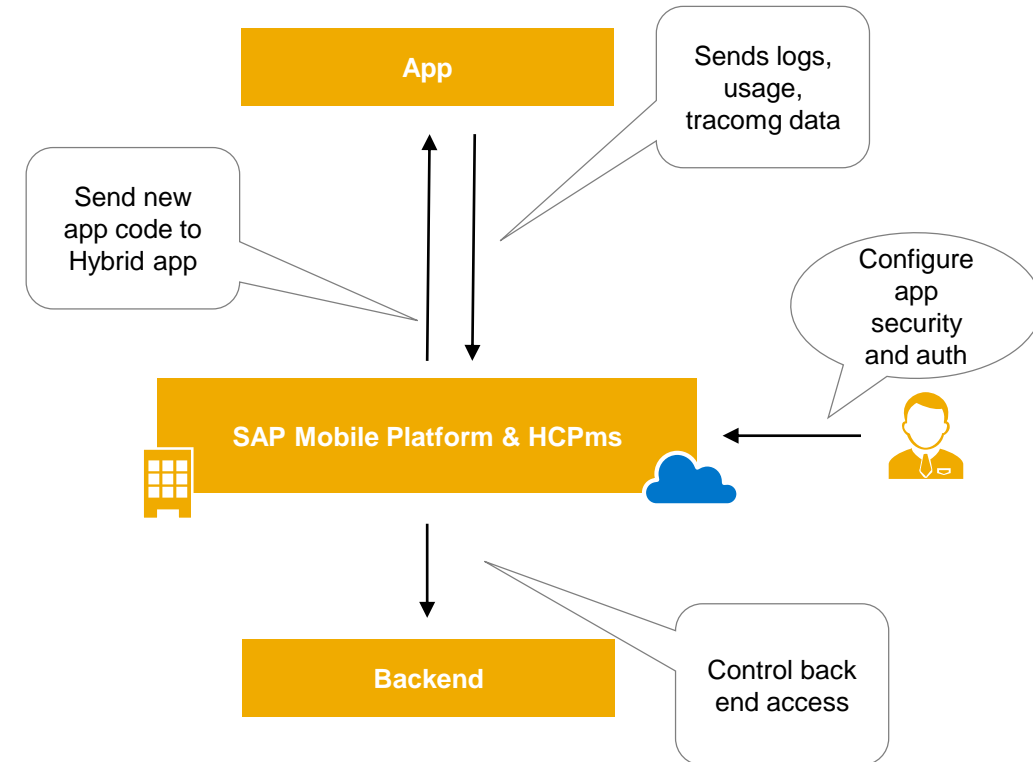- App usage details (clicks on functions etc)

App

Registers with unique ID

How many people still use app X v1.3?

SAP Mobile Platform & HCPms

Backend
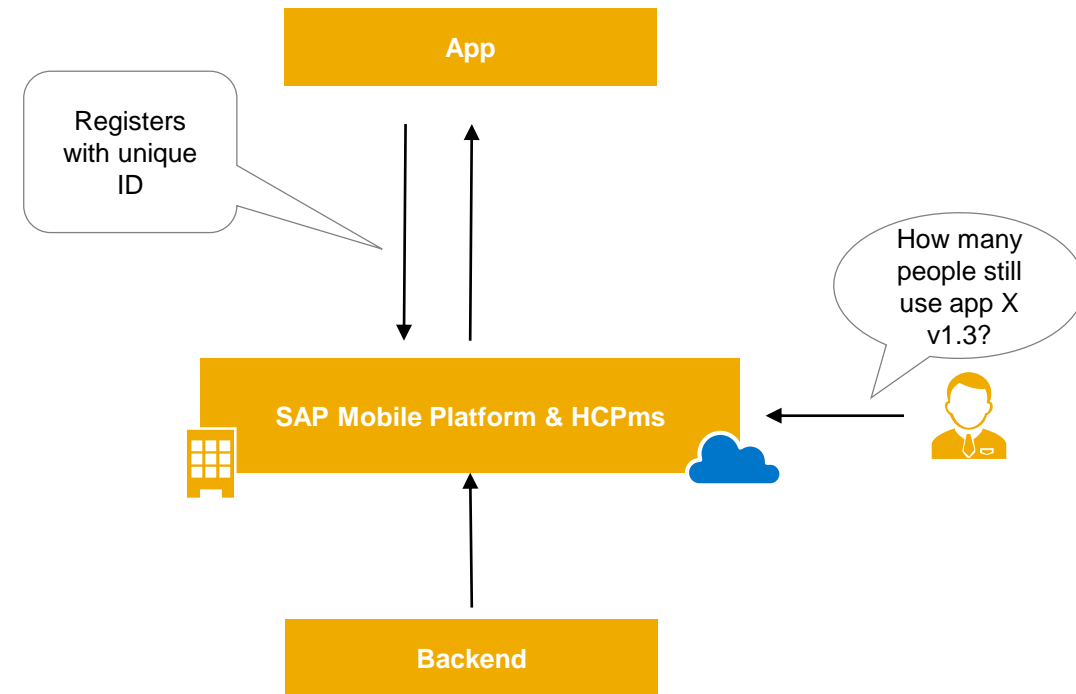
Mobile Platform
- Governance

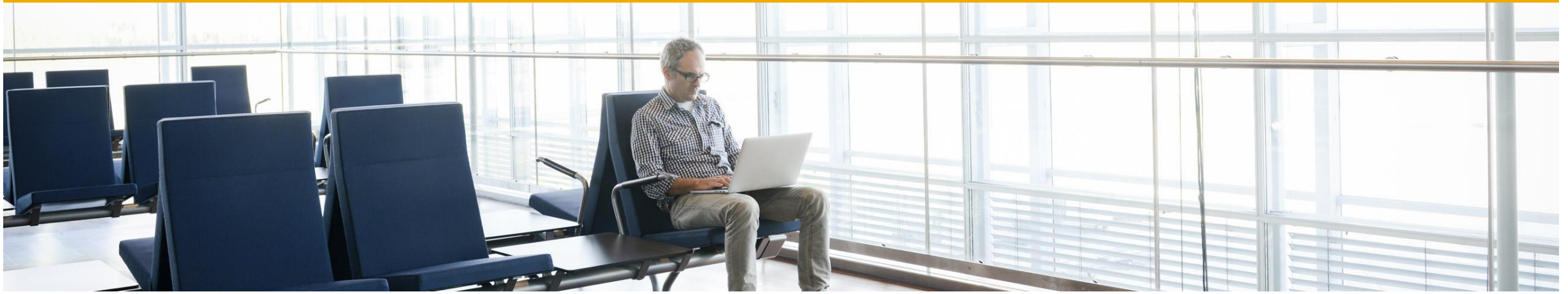## Security

- Security Profiles – authentication

- Client policies – password, logging, device access

- Services Whitelist – defines access to services

Maintainability

- Resource bundles – apps can download resources (e.g. config data, localization settings, …)

- In-place updates – Hybrid apps can be updated via HCPms
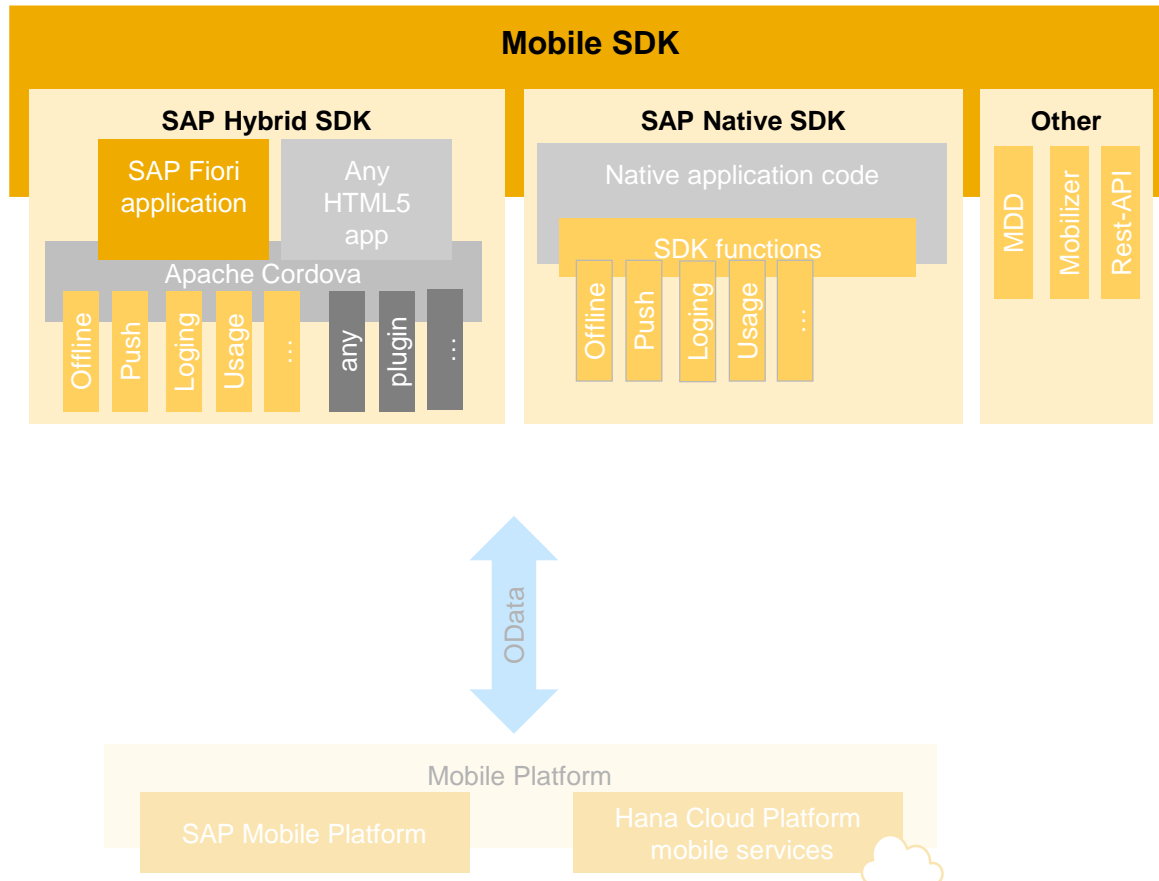
- Remote logging, usage reporting, end-to-end tracing, …

App

Sends logs, usage, tracomg data

Send new app code to Hybrid app

Configure app security and auth

SAP Mobile Platform & HCPms

Backend

Control back end access

Mobile SDK

SAP Mobile Software Development Kit

SAP Mobile SDK
- Components

Mobile SDK

SAP Hybrid SDK
- SAP Fiori application
- Any HTML5 app
- Apache Cordova
  - Offline
  - Push
  - Loging
  - Usage
  - ...
  - any
  - plugin
  - ...

SAP Native SDK
- Native application code
- SDK functions
  - Offline
  - Push
  - Loging
  - Usage
  - ...

Other
- MDD
- Mobilizer
- Rest-API

OData

Mobile Platform
- SAP Mobile Platform
- Hana Cloud Platform mobile services

Hybrid SDK (Kapsel)

- Plugins for Apache Cordova for building HTML5 apps.
- Provides mobile qualities for developers – e.g. logon, security, offline, push, native integration, …

Native SDK

- Resources for developers to build native applications and include mobile platform features

Other

- MDD – Meta Data Driven apps. Used by the SAP field service applications (Syclo)
- Mobilizer – For mobile banking and payment
- REST API – Platform interface for apps that do not use the mobile SDK

SAP Fiori on mobile devices
- Fiori Mobile context

SAP Back End

Fiori UX

NW Gateway

SAP HANA Cloud Platform

SAP S/4 HANA

Mobile Platform

SAP Mobile Platform

Hana Cloud Platform mobile services

SAP Fiori, cloud premium**

SAP Mobile Secure

1

2

3

Number of available Mobile Features increases

Hybrid Mobile App

SAP Fiori Client

Features

Offline

Push*

Certificates

Encryption

Device integration

…

Mobile SDK

Hybrid SDK

Plugins

Login | Offline | Encryption | Sec Proxy | Certs/OTP

Browser

1-Fiori Mobile (Fiori Client app using Mobile Platform), 2-Fiori Client without Mobile Platform, 3-Webbrowser
*Out of the box Push support for Fiori and Fiori Client is a road map feature. SAP roadmap disclaimer applies   **SAP Fior, cloud edition premium - is a planned feature and subject to change, the SAP roadmap disclaimer applies

HTML5 app development
- SAP WebIDE context

SAP Web IDE

- Tool to develop Web and Hybrid apps
- Build new apps
- Modify Fiori apps

HTML5 Development	Applications	Distribution

SAP UI5
JS UI Framework

SAP Fiori UX
UI design paradigm

SAP WebIDE
App development
tooling

HTML5

3rd party HTML5
tooling

Mobile SDK
hybrid

on-premise
Web

HCP
Web

HCPms

SMP
on-premise

Mobile Secure
App distribution,
management and
enhanced security
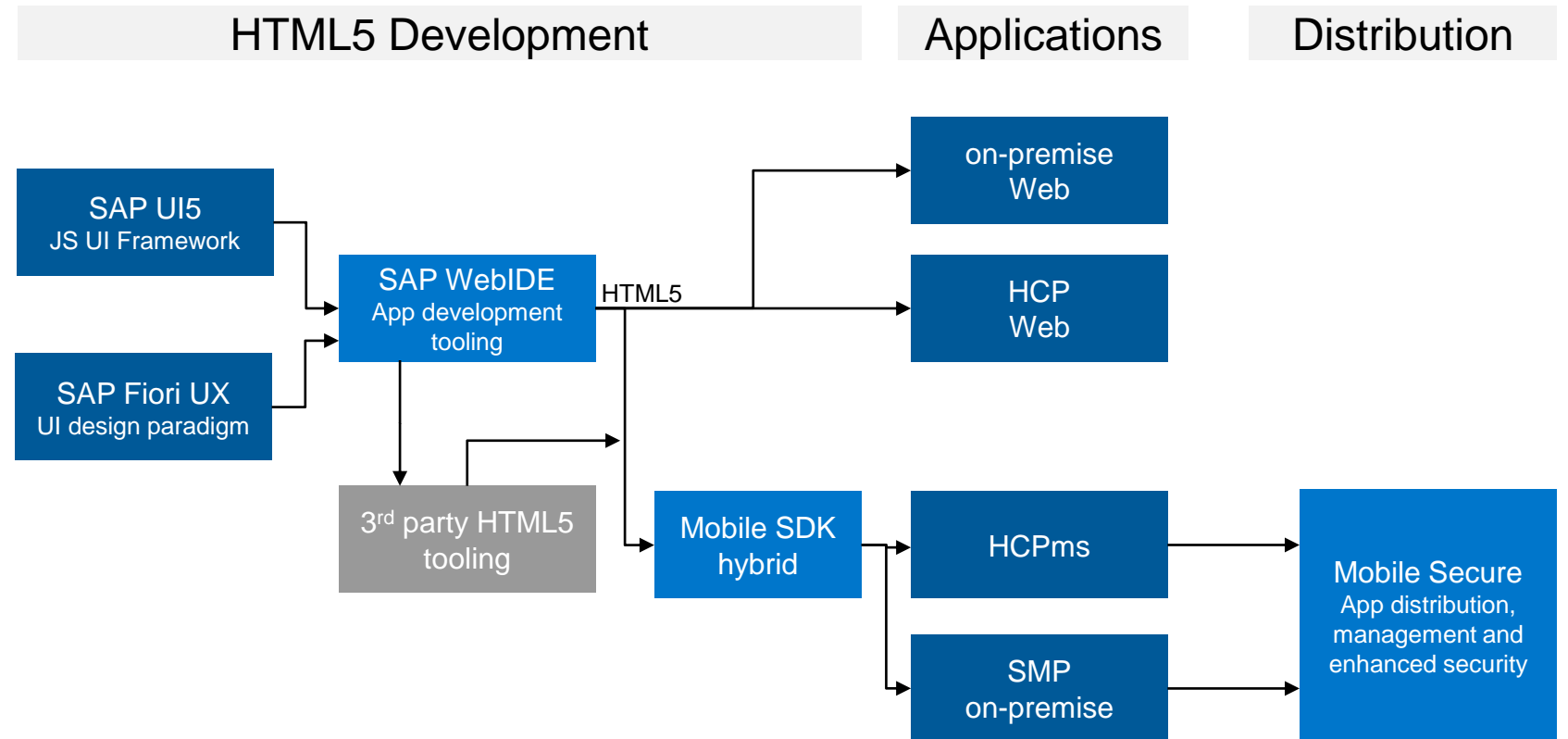
HCP technologies and their mobile use case

Create web apps

- SAP WebIDE
- SAP Build

Run web apps

- Hana Cloud Platform
- SAP Cloud Portal
- SAP Fiori launchpad
- SAP Fiori cloud edition
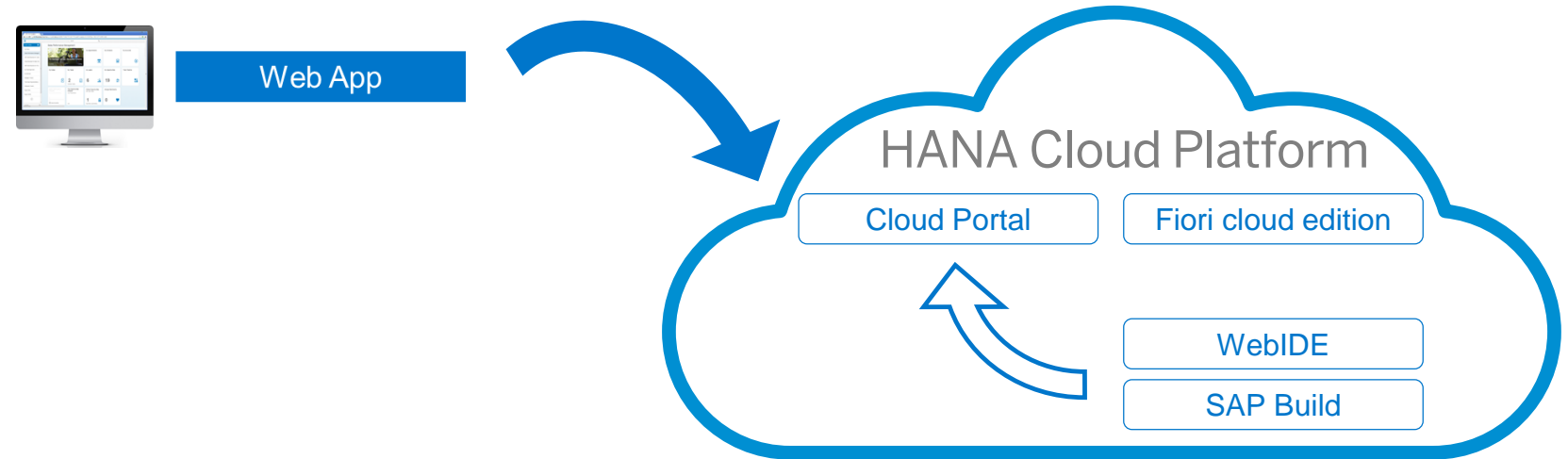
Web App

HANA Cloud Platform

Cloud Portal | Fiori cloud edition

WebIDE

SAP Build

This is a high level overview that serves as an illustration and not a comprehensive list of all possible technology options

HCP technologies and their mobile use case

Create hybrid apps

- Hybrid SDK / Kapsel
- SAP Build
- SAP WebIDE

Develop native apps

- Native mobile SDK

Distribute, manage and build

- HCP mobile secure
- Fiori cloud, premium edition
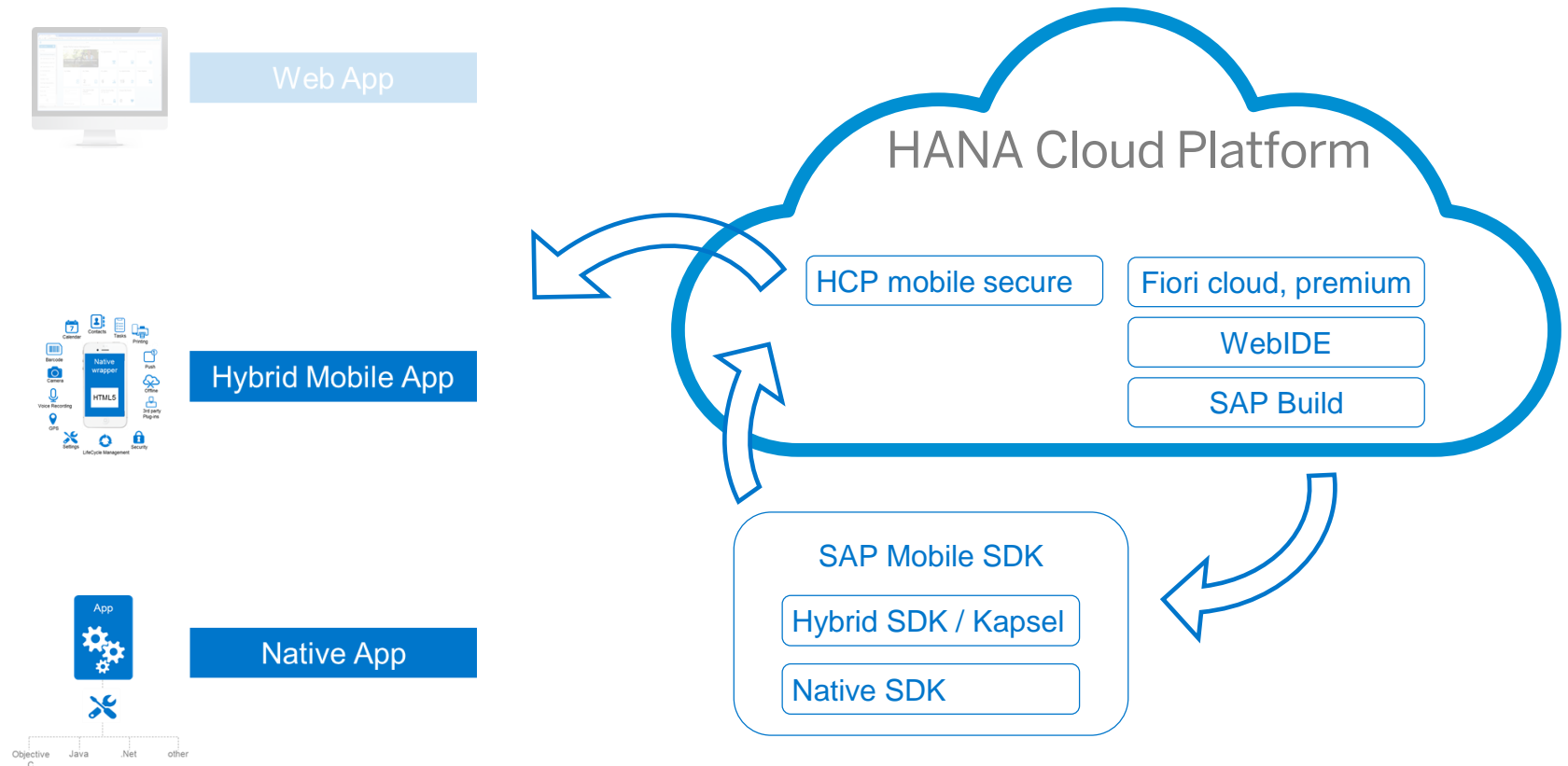
Web App

Hybrid Mobile App

Native App

HANA Cloud Platform

HCP mobile secure | Fiori cloud, premium

WebIDE

SAP Build

SAP Mobile SDK

Hybrid SDK / Kapsel

Native SDK

This is a high level overview that serves as an illustration and not a comprehensive list of all possible technology options

HCP technologies and their mobile use case

Serve web apps

- Hana Cloud Platform
- SAP Fiori launchpad
- SAP Fiori cloud edition
- SAP Cloud Portal

Serve Hybrid and Native

- HCP mobile services

Easy Fiori mobilization

- SAP Fiori cloud edition
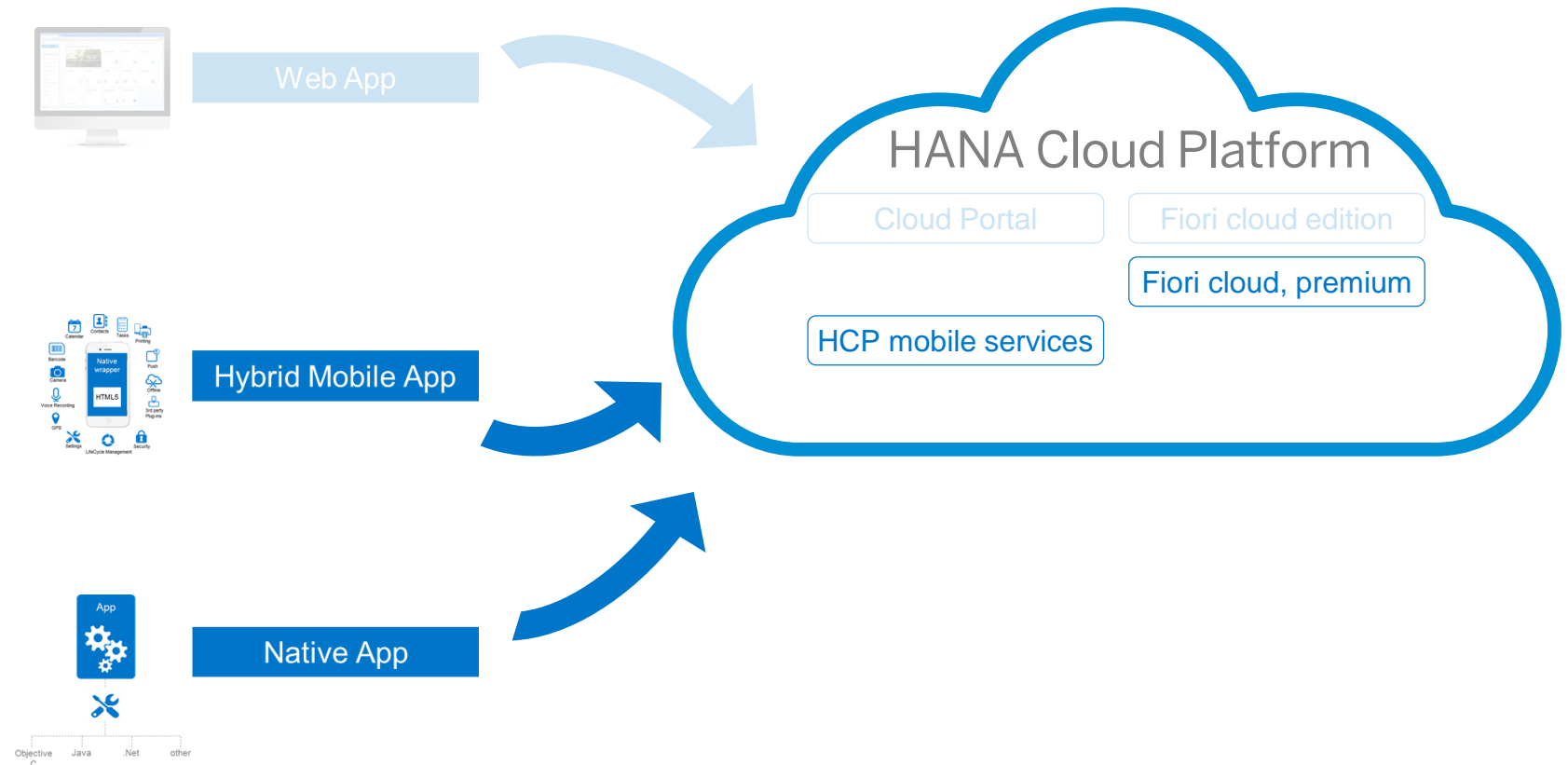
Web App

Hybrid Mobile App

Native App

HANA Cloud Platform

Cloud Portal

Fiori cloud edition

Fiori cloud, premium

HCP mobile services

This is a high level overview that serves as an illustration and not a comprehensive list of all possible technology options

Summary

Going mobile with Hana Cloud Platform

- **Build mobile apps for many use case**

  Web App

  Hybrid Mobile App

  Native App

- **Open development paradigms**

  Sencha ··· jQuery

- **Build, integrate and extend**

  HANA Cloud Platform

  S/4 HANA

  SAP BS, CRM, HR, etc

  3rd Party
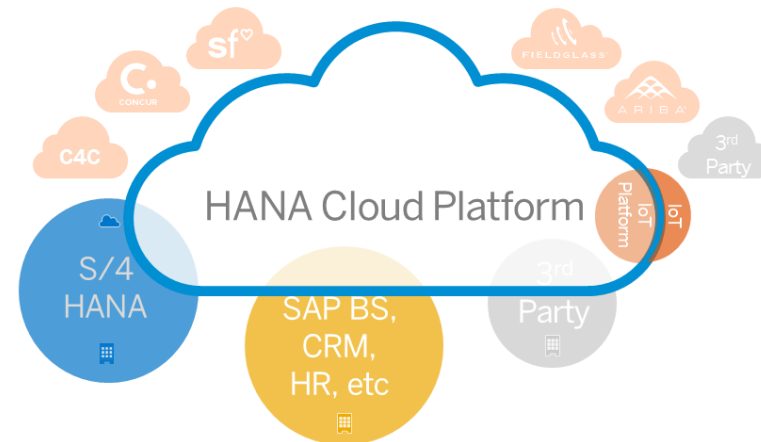
Thank you

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