

# RF Performance - ITSmobile runs AJAX Overview and Description Paper of the Service Offering

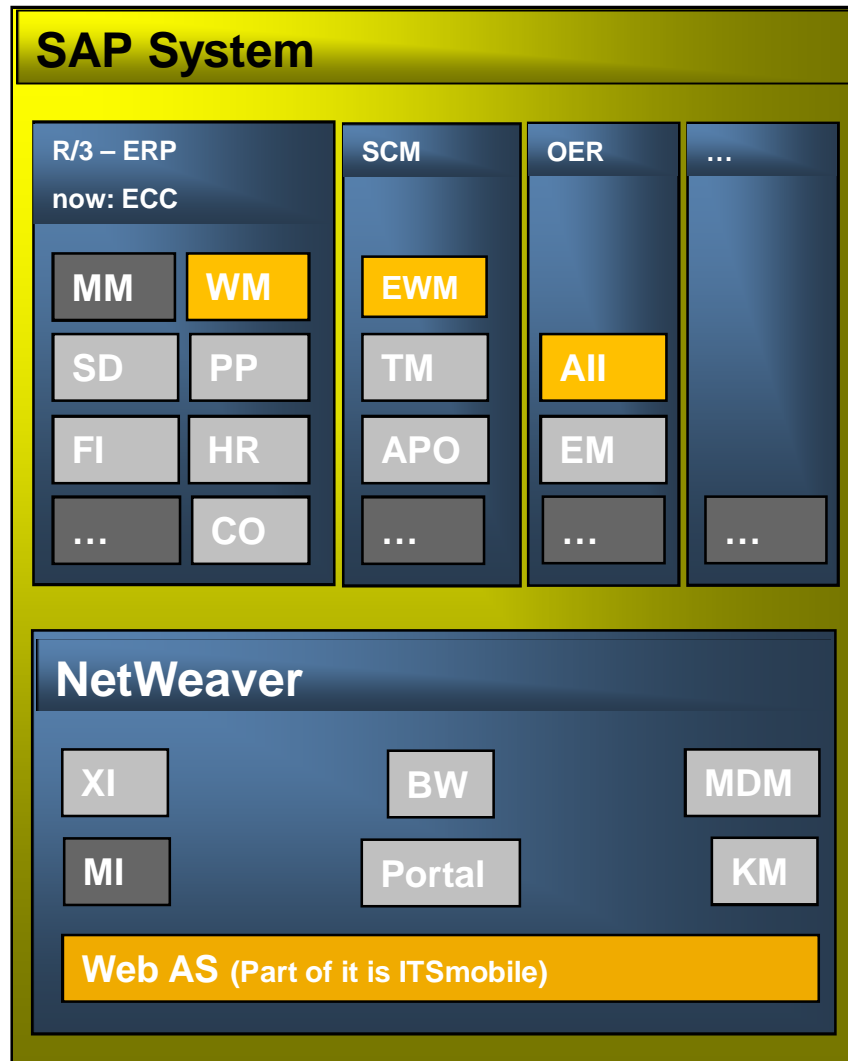
V 8.00  
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The SAP logo is located in the bottom left corner of the slide. It consists of the letters 'SAP' in a bold, white, sans-serif font, set against a blue square background with a white diagonal line.

# Overview of the ITSmobile Technology

# SAP Systeme Overview



## Solution and ABAP Logic

ABAP Logic will be not effected therefore the backend performance will not be changed. The offering is applicable for all application where ABAP Dynpro is used and have to be accessed web-based using ITSmobile technology.

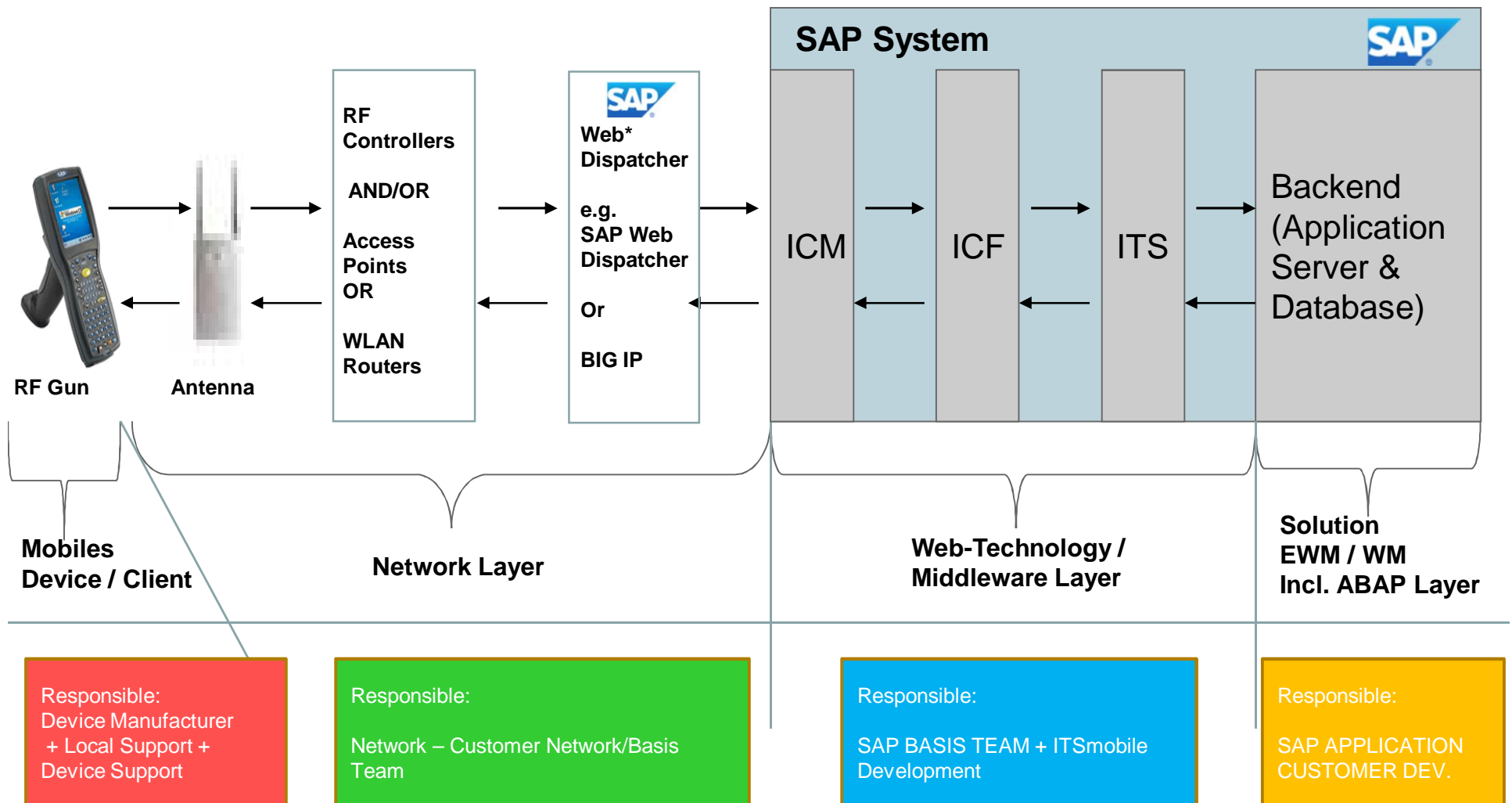
Major SAP solutions: SAP ERP-WM, SAP EWM, SAP Auto-ID

## ITS (mobile) is part of the technology

The service offering will enhance the ITSmobile communication procedure and therefore will only improve the

# Influencing Elements for RF performance

# RF Gun → Network → ITS Mobile → EWM → ITS Mobile → Network → RF Gun



# Influencing Elements

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- System Architecture
  - Basis Set Up
  - CPU quantity
  - CPU frequency
  - Hana Database
- EWM Solution
  - Design chosen
  - Customizing
  - Post Processing Actions
  - ABAP standard
  - Developments
  - Validation Profile
  - RF Framework
  - RF Screen template
- ITS Mobile
  - Architecture
  - HTML Generator
  - MIME Object
  - AJAX Implementation
- Communication / Hardware
  - Wireless Network
  - Router/Switch
  - RF Device
  - Internet Browser
- Warehouse Physical Layout
  - Structure
  - Access Point location

# Responsibilities and Status

## SAP or Implementation Partner Responsibilities

### EWM Solution

- Design Review
- Customizing Optimizing
- Post Processing Deactivation
- ABAP standard Optimizing
- Developments Optimizing
- Validation Profile Optimizing
- RF Framework Review
- RF Screen template Optimizing

## Customer Responsibilities

### System Architecture

- Basis Set Up Optimizing
- CPU quantity increasing
- CPU frequency Update
- Hana Database Optimizing

# Responsibilities and Status Check List

## SAP or Implementation Partner Responsibilities

### ITS Mobile

- Architecture Review
- HTML Generator Check
- MIME Object Check
- AJAX Enhancement
- Internet Browser Optimization

## Customer Responsibilities

### Communication / Hardware

- Wireless Network Measure
- Router / Switch Optimizing
- RF Device Optimizing
- Internet Browser Optimizing



# Responsibilities and Status

## SAP or Implementation Partner Responsibilities

## Customer Responsibilities

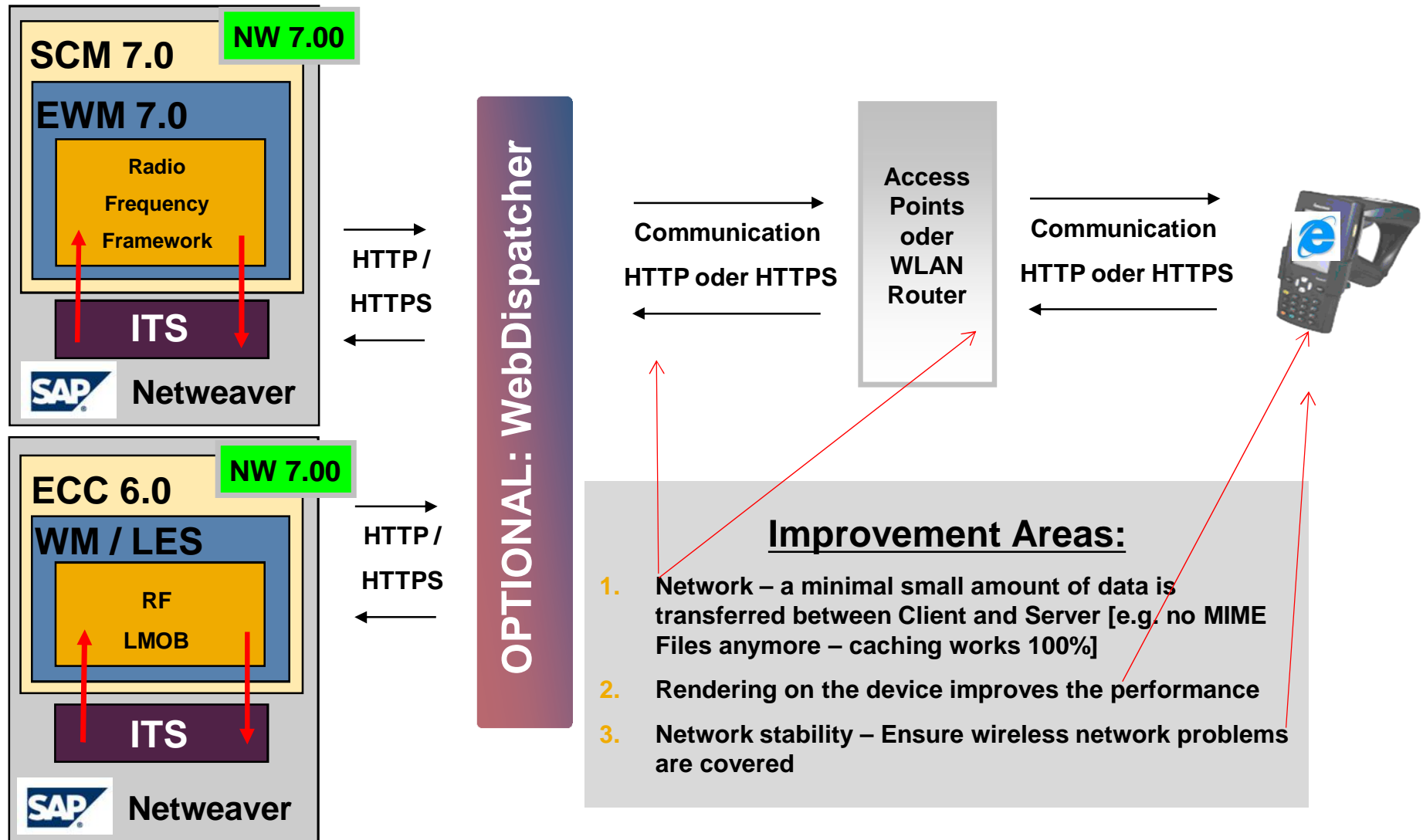
### Warehouse Physical Layout

- Structure positioning
- Access Point Location Check

# AJAX IMPROVEMENT

Systemlandscape and  
Definition of the parts that will be  
improved

# ITSmobile Architecture (NW > 700)



# AJAX: Deliverables of Enhancement

## Part of the Improvement/Solution

- With AJAX improvement the rendering will be improved, this rendering improvement ensure that performance gets on the device (rendering performance get improved)
- With AJAX the sending of Data to server gets controlled, means network issues can be controlled. With newest note: 1985219 E2E integration can be ensured.

### Performance Improvement

#### **Improved Rendering:**

- only HTML Body is send to the device
- On the device only the HTML body is replaced means all HTML Header information doesn't need to be renewed by the browser (DOM)
- Improvement in Memory usage

#### **Important remark:**

Improvement is especially visible on old devices with old operating systems

Interesting especially for customer with old device system landscape and many different devices due to historical reasons

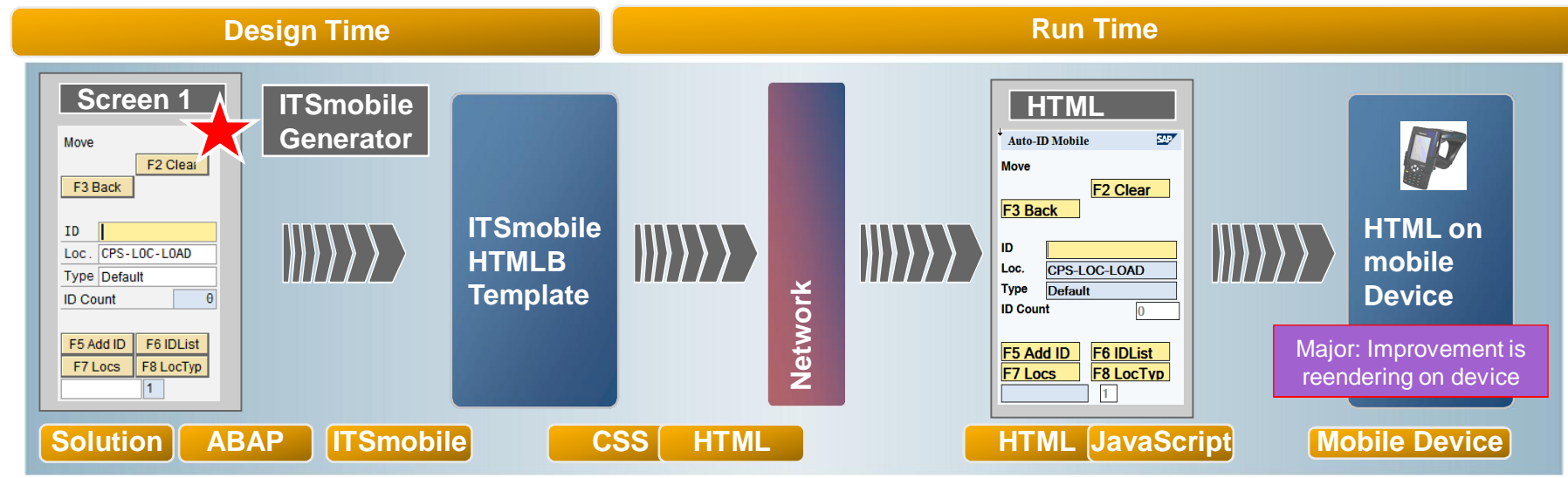
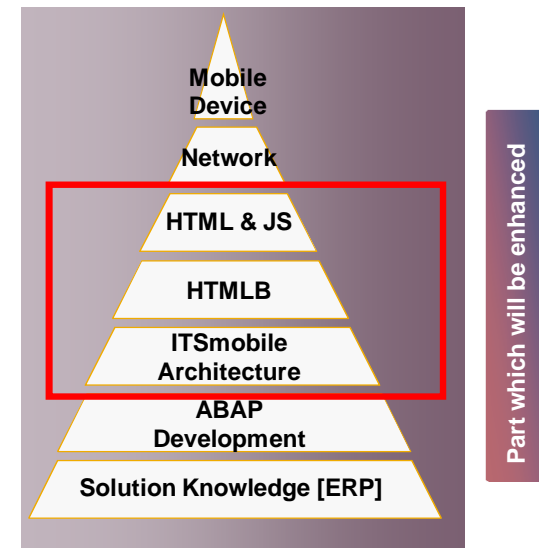
### Managing of Errors & Network Stability

#### **Improved Error Handling:**

- Sending of data is controlled by JavaScript
- Once data is send and nothing is coming back from the system user gets and error message and can resend the data (feature what some industrial browser have)
- With Note: 1985219 it is possible to send data again
- Usage of industrial Browser or any other Network stability software is not important

# Detailed Architecture – the ITSmobile Model

“ Mobile Device Integration:  
To run a mobile application the best-practise knowledge of all levels of the pyramid is necessary.

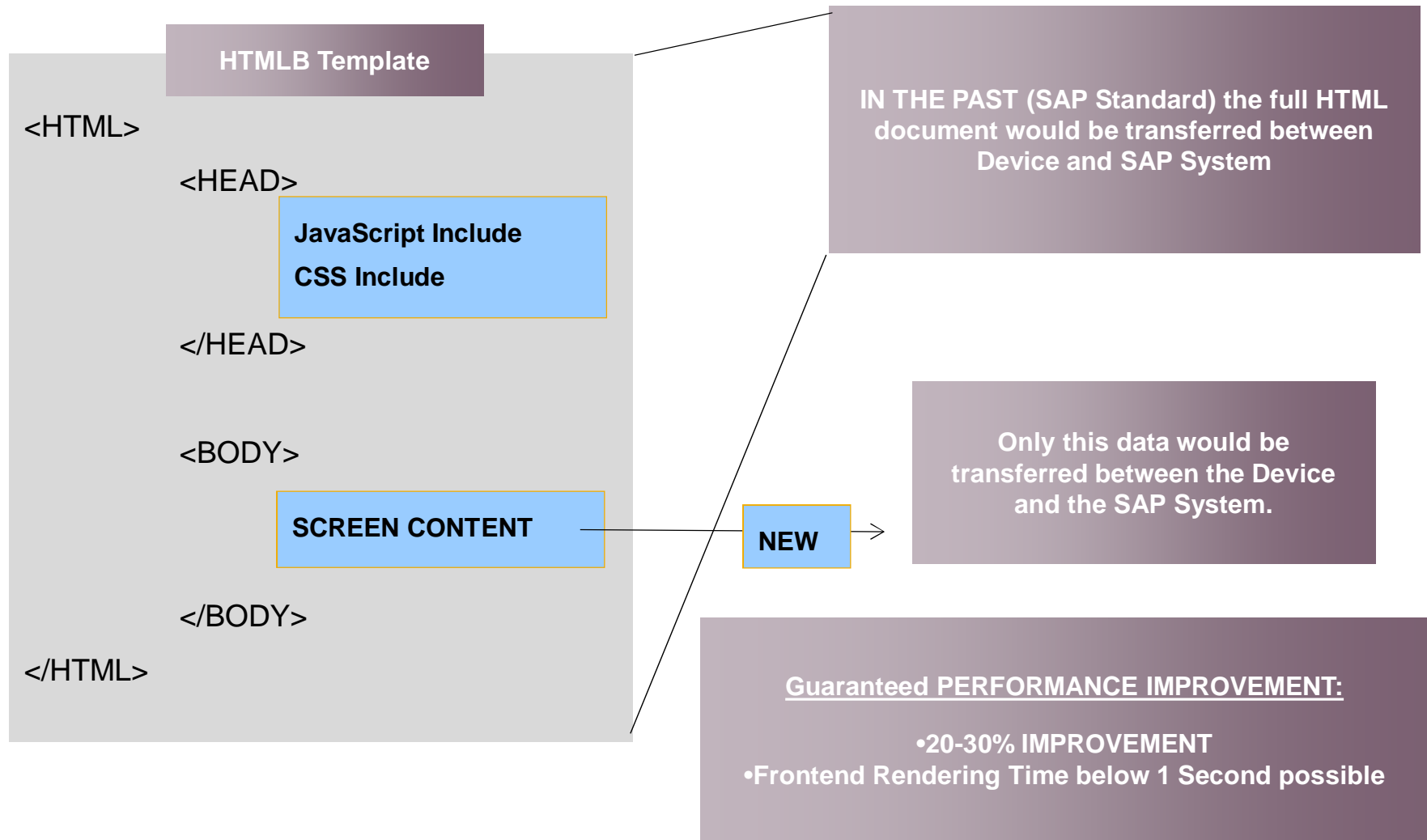


Details of the improvement

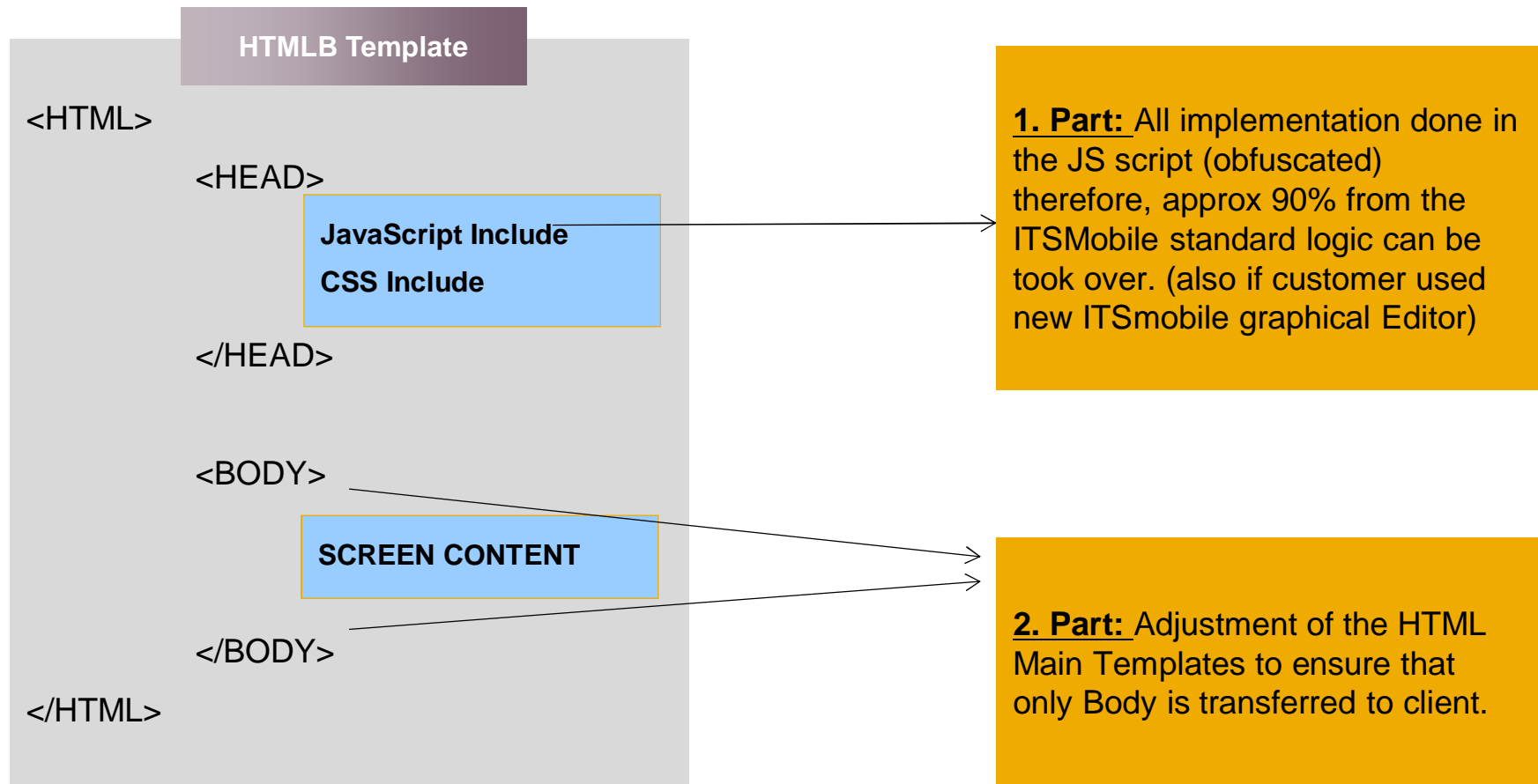
AJAX Rendering Part

# Technical Background

## Solution Details and Proposal



# Technical Details – of ITSMobile AJAX implementation





# Measurements Comparison

Project Experience/Example

ITSMobile Standard  
vs. ITSmobile AJAX based

# Performance Comparison (customer experience) ITSmobile Standard and ITSmobile runs AJAX

**Report /GLB/KGTMHR\_MOBILE\_ANALYSIS**

Selections | Export Logfile

Date	Time	F-Code	Front-End	Backend	Full Time	ITSPath
31.01.2...	08:52:22	ENT	1.742	59	1.801	~f1NUQVRFP TcyOTMuMDAyLjAxLjAxAA==
31.01.2014	08:52:28	5	2.895	95	2.990	~f1NUQVRFP TMOODAuMDAzLjAyljAxAA==

**Report /GLB/KGTMHR\_MOBILE\_ANALYSIS**

Selections | Export Logfile

Date	Time	F-Code	Front-End	Backend	Full Time	ITSPath
31.01.2...	14:28:37	ENT	696	47	743	~f1NUQVRFP TMwMzMSLjAwMH4wMS4wMQA=
31.01.2014	14:28:37	ENT	562	47	609	~f1NUQVRFP TMwMzMSLjAwMH4wMS4wMQA=

# APPENDIX

## Improvement of ITSmobile Design

(only possible with rendering engine = good Browser)  
= Windows CE5.0 / Windows CE6.0 / RohElements /  
Enterprise Browser

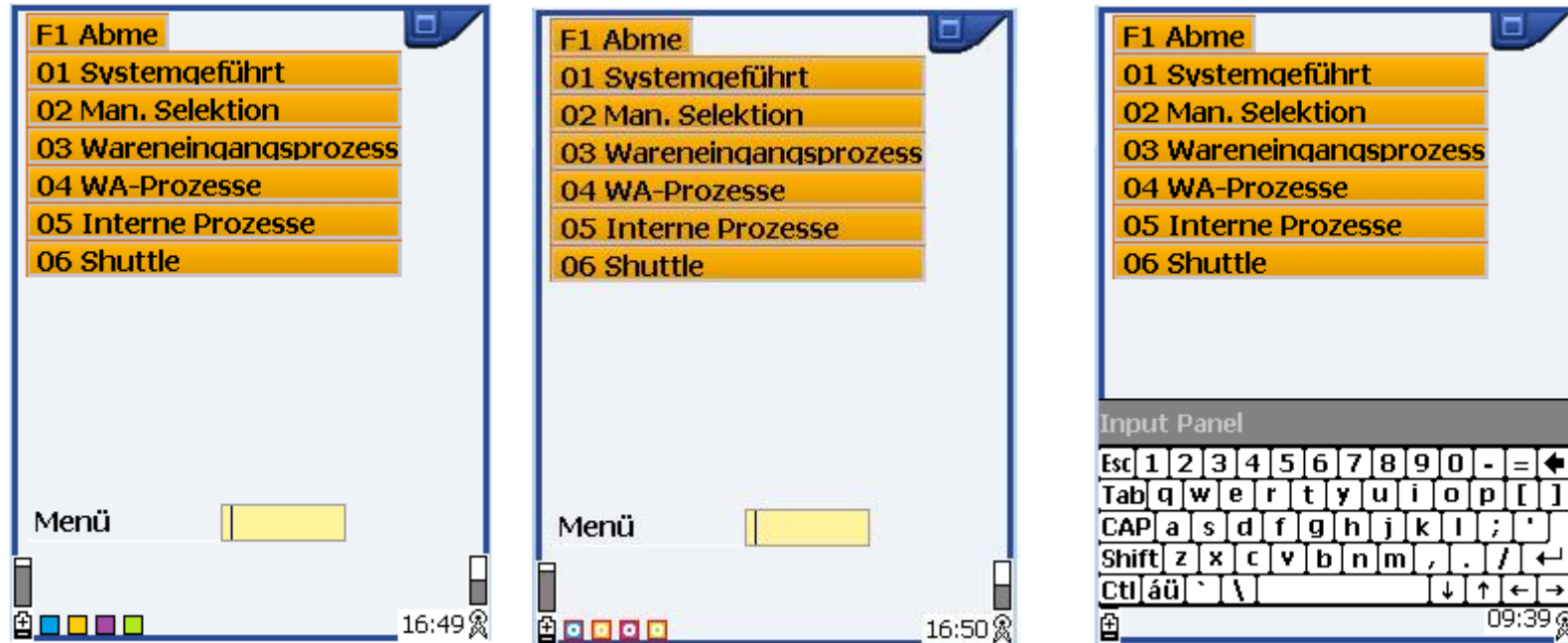
# NEW Design SAP ITSmobile by SAPConsulting

The image displays two screenshots of the SAP ITSmobile by SAPCons interface. The left screenshot shows a menu with the following options: 1.Inbound Proc. >, 2.Outbound Proc. >, 3.Putaway / Picki>, 4.Inquiries >, 5.In Land Trackin>, and 6.Physical Invent>. The right screenshot shows a data entry screen with the following fields: P/O (4500016125), L/I (1 of 6), Qty (100,000), Plnt/SLoc/St.Type (M002 S100 003), Mtl (1000000434 EA), and description (FLANGE, PIPE: ORIFIC E WELD NECK- SDP HSB). The interface includes various function keys (F1-F9) and a search field.

## SAP NOVA Design Improvement:

If requested and additional change of the design on devices is possible – see above the SAP Consulting NOVA Design.

# NEW Design & Functions



## **Add. Function:**

1. Display SHIFT, FUNC, ALPHA, CTRL via DIVS/Images using JavaScript or EQUI Tags
2. Switch on/off Keyboard with a key on the device



# Thank You!

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