virtual factory Operating System

An Open Environment for Development of Manufacturing Applications

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www.vf-os.eu
Evolution of ICT & SW
Industrie 4.0

www.vf-os.eu
Virtual Factory

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Traditional Operating Systems
Industrie 4.0 Operating System
Open Apps Dev Kit (OAK)
Open Apps Dev Kit (OAK)
OAK Software Development Kit

FIWARE

SDK

API

WebApp

Tablet

Gaming

Console

Mobile

Device

Smart

Phone

Connected

Car

Connected

Appliance

Enterprise

Apps

Partners

Connected

Apps

Websites
- Concentrator for vf-OS resources
- Aggregator of APIs
- Tools & Procedures
- vApp Build and Deploy Libraries
- EFFRA coordination of WG-05 for SDKs
- Abstraction of the Factory
- Abstraction of the Business
- Distributed Building
- Container isolation
- Interoperability between different systems
OAK Studio
- Web-based GUI of the SDK
- Container-Targeted
- Full-featured IDE
  - Syntax Highlighting
  - Drag & Drop
  - Debug
  - ...
- Code Editor & Build Interface
OAK Process Designer
OAK Process Designer

- Model Process Workflows
- Orchestrate pre-built assets
- BPMN style definitions
- Reuse of vApps
OAK Front End
Front End Editor

- Allows simplified input of abstraction layers
- How-tos and auto-complete guides
- Based on Angular and Bootstrap
- Consumable and integratable
- MicroService of the vf-OAK studio
Front End Editor

- **Input:**
  - Configuration (languages, etc.)
  - XML / HTML-alike styling for the structure

- **Output:**
  - Clickable prototype
  - Generates code for further usage
- Example: `<app></app> =`
System Dashboards
OAK Dashboards

- Command & Control environment
- Central Dashboard
- Task Manager
- Provides information about runtime vApps
Development Process
Developers Engagement Hub

- Share Code & Development
- Disseminate the vf-Apps
- Promote Reuse
- Promote Development
- Engage Community
Developers Engagement Hub

- Community Building tools
- Open Source Git Repositories
- Multiple projects and Sub-projects
- Container Technology
- Continuous Integration
- Project Management
Developers Engagement Hub

- Dissemination:
  - Wikis
  - Blogs
  - Forums, etc.
  - Multimedia

- Collaboration:
  - Issue-trackers per Topic
  - Chats
  - Social Networks
  - Gamification
OAK Development Timeline

- OAK SDK
- OAK Studio
- Process Designer
- Front End
- System Dashboards
- Developers Engagement Hub
Questions?

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