# Digital Transformation with FDT 3.0

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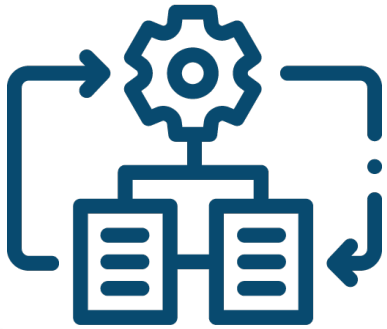
# Agenda

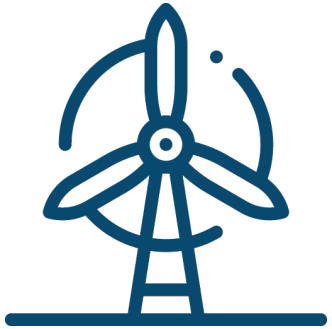
- State of Industry
- Digital Transformation with FDT 3.0
- Development with FDT 3.0
- Endless Business Benefits
- FDT 3.0 Deliverables
- FDT 3.0 Demo
- Press Kit
- Questions & Answers

# STATE OF THE INDUSTRY

# Designed for Diverse and Modern Industrial Markets



Process Automation



Hybrid Automation

Factory Automation

- **Open Integration**
  - Standardized
  - Data centric
  - Mobile
  - Remote access
- **Flexible Architecture**
  - Scalable
  - Agile
  - Secure and robust
  - Compatible

# Expanding Today's Capabilities

Today

Device = Object

Tomorrow

Device = App

# Support for All Industry Standards, Platforms and Protocols

















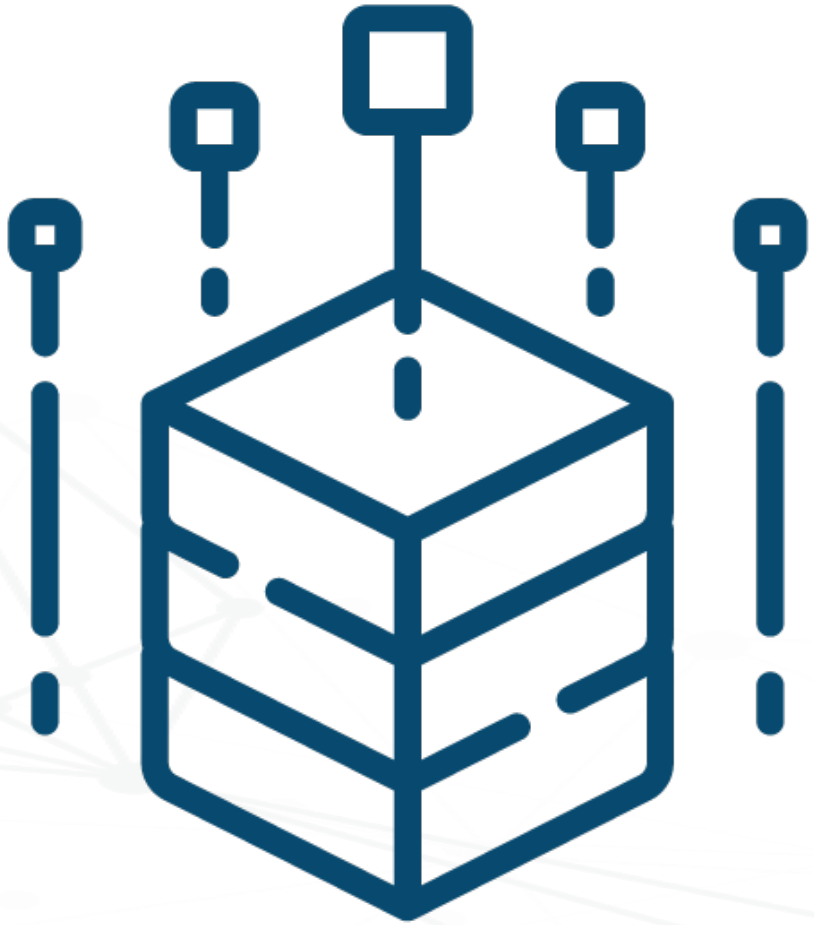






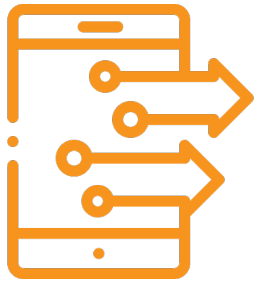
FDT represents the leading global standard for universal device and network integration for both the process and factory automation markets. It is engineered for use with all major industrial communication protocols, legacy protocols and proprietary protocols with fully transparent tunneling through any mixed network topology.

# FDT is Empowering Today's Intelligent Enterprise



- Secure
- Standardized
- Web client based
- Information driven
- Service oriented

# Enhancement Driven by Use Case Scenarios



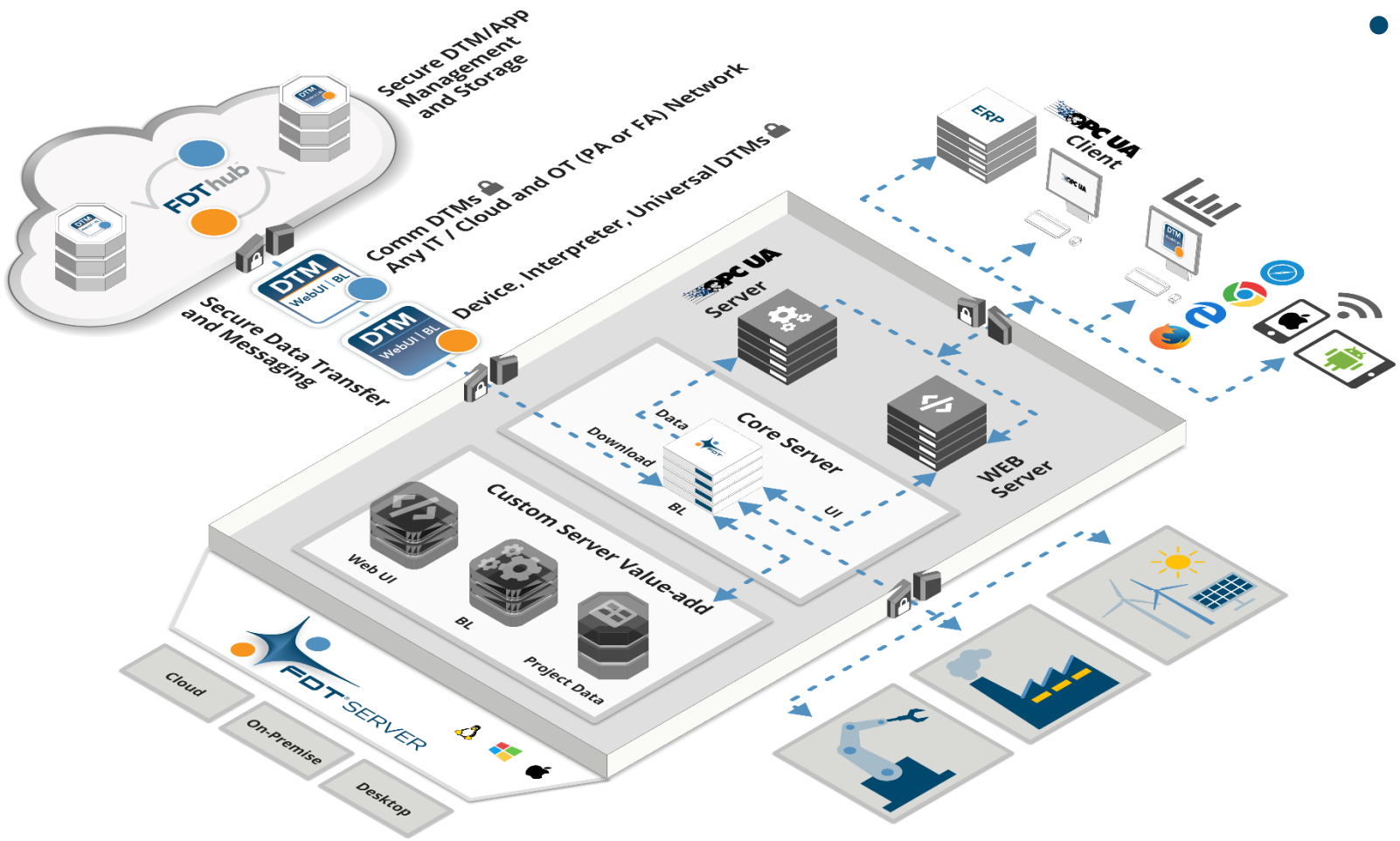
- **FDT Mobility**
  - Secure mobile field device management
  - Improves workflow for plant workers
  - Enhances maintenance efficiency

- **FDT Security**
  - Secure by design
  - Sensor-to-cloud
  - Air-gapped support

- **FDT*hub*™**
  - Single DTM repository
  - All certified DTMs
  - Secure online or offline

# DIGITAL TRANSFORMATION WITH FDT 3.0

# FDT IIoT Server (FITS™) Architecture




- **FDT Server Features**
  - Single server environment
  - Skid to cloud-based solutions
  - Built-in security
  - Platform independence
  - Native OPC UA Server
  - Embedded Web Server
  - Universal device integration
  - Common Component



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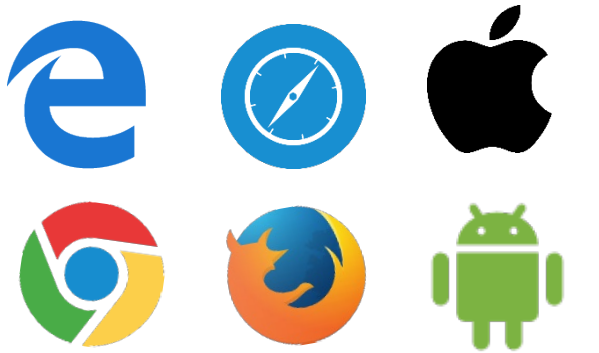
# The Open Integration Advantage

- **FDT IIoT Ecosystem**
  - FDT Server for distributive architectures for single and multiple facilities
  - FDT Desktop for single user architectures
  - FDT DTM for any device
- **Flexible Deployment Architecture**
  - Skid-to-cloud scalability
  - Cloud, on-premise, edge
  - Cross platform functionality
- **Sensor-to-Cloud Integration**
  - Direct maintenance and optimization data path
  - Support for all IT networks and OT protocols
- **Backwards Compatibility**
  - FDT Desktop environment
  - FDI DP integration

# Key Features of FDT Server™

- **Integrated Web Server**
  - Leverages a browser-based environment
  - Modernizes field device management
  - Transforms OT access for remote asset management
- **Embedded OPC UA Server**
  - Leverages a standard OPC client-based environment
  - Enables IT/OT integration of real-time data
  - Supports ERP/MES for enterprise connectivity
  - Supports OPC UA PubSub
- **End-to-End Security**
  - TLS encrypted communications with 509v3 certificates for authentication
  - Role-based access control
  - On-the-wire security for enabled protocols





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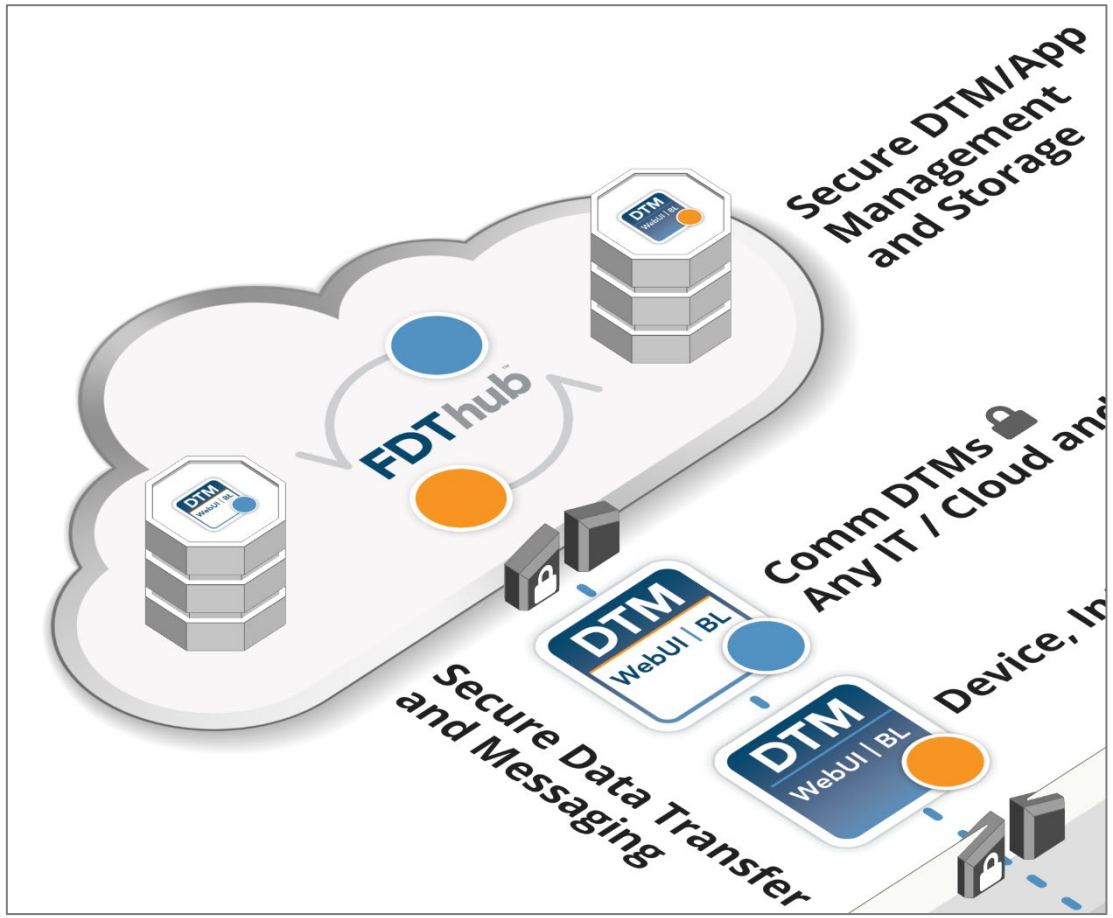
# FDT*hub*™ DTM Repository




- **FDT*hub*™**
  - Driven by end user demand for simplicity
  - Cloud based or onsite
  - Certified FITS based FDT DTM storage and management
  - Server to server communications
    - No end user browsing necessary
  - Automatic device discovery support
  - Secure DTM transfer, messaging and updates



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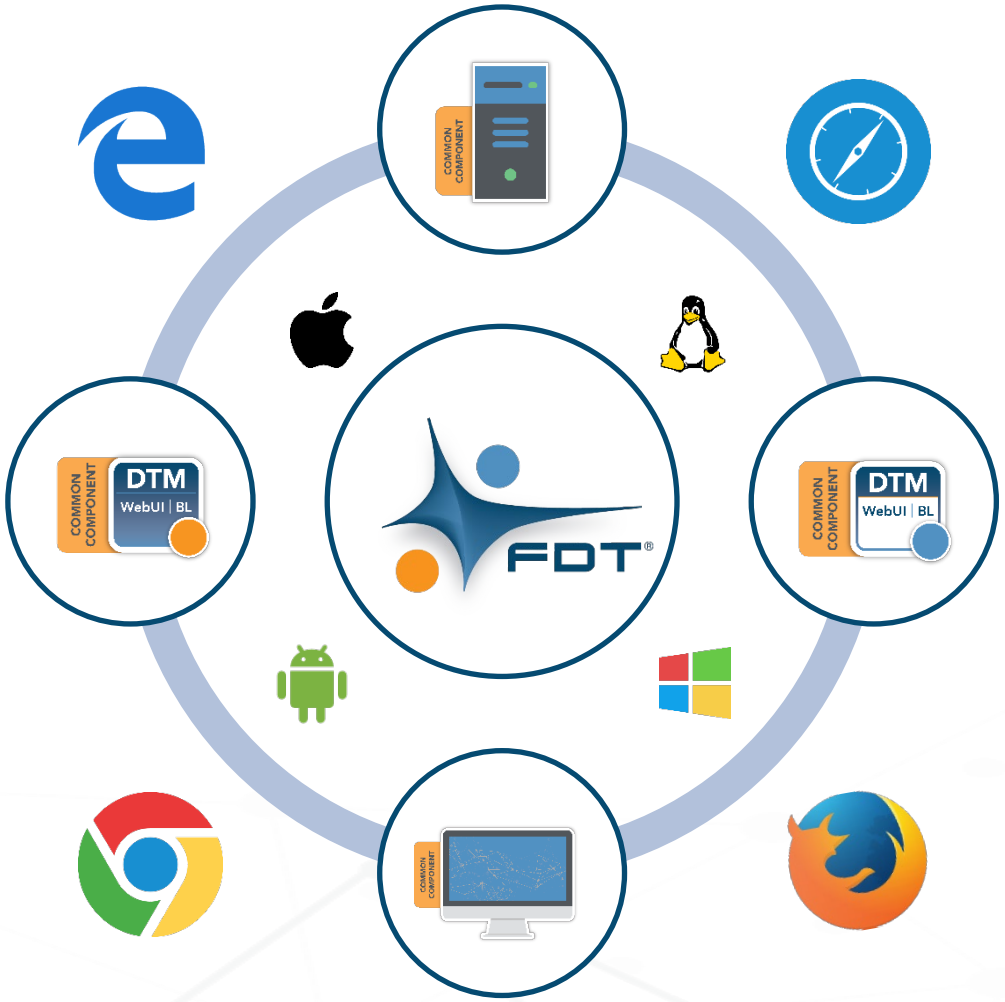
# DEVELOPMENT WITH FDT 3.0

# Empower Innovative Business Models

- **FDT Common Components**
  - Create an Ecosystem of IIoT Ready Solutions
  - Platform Independent Tool Sets
  - Out-of-Box Ready
    - FDT Server - Common Components
    - FDT Desktop - Common Components
    - FDT DTM - Common Components
  - OPC UA Integration Auto-enabled
  - Modern Development Environment for Customization
    - WebUI (HTML5, Java Script)
    - Value-add for competitive differentiation
    - App support

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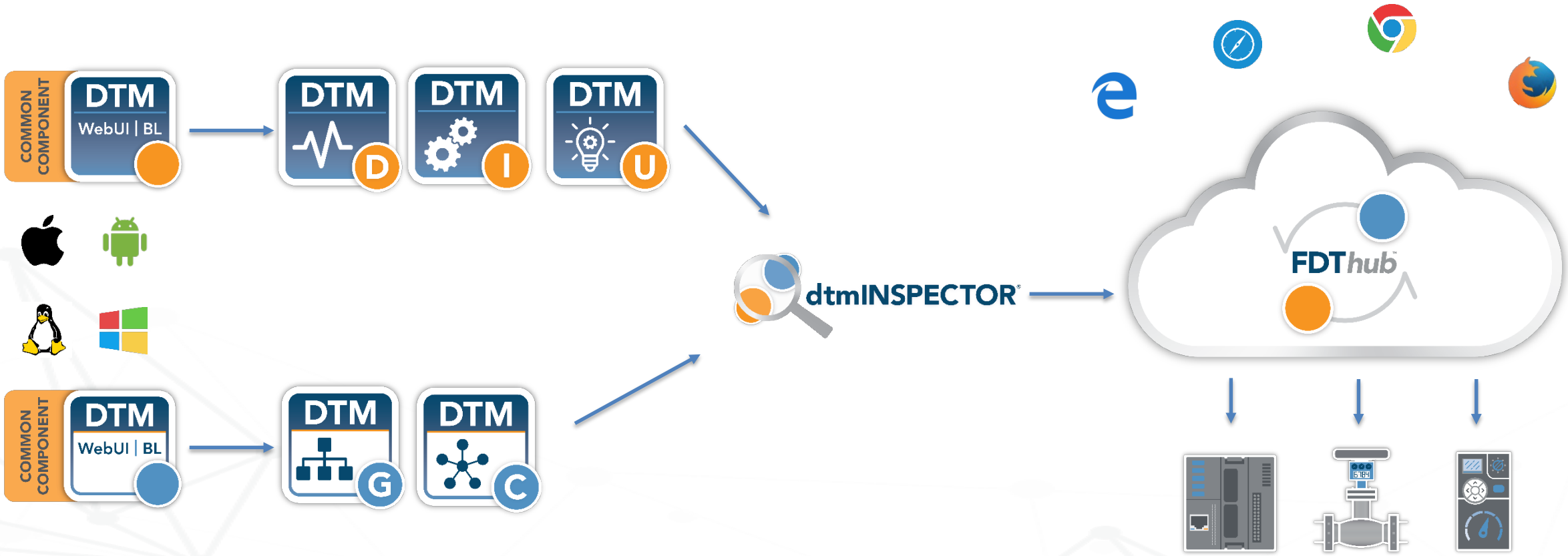
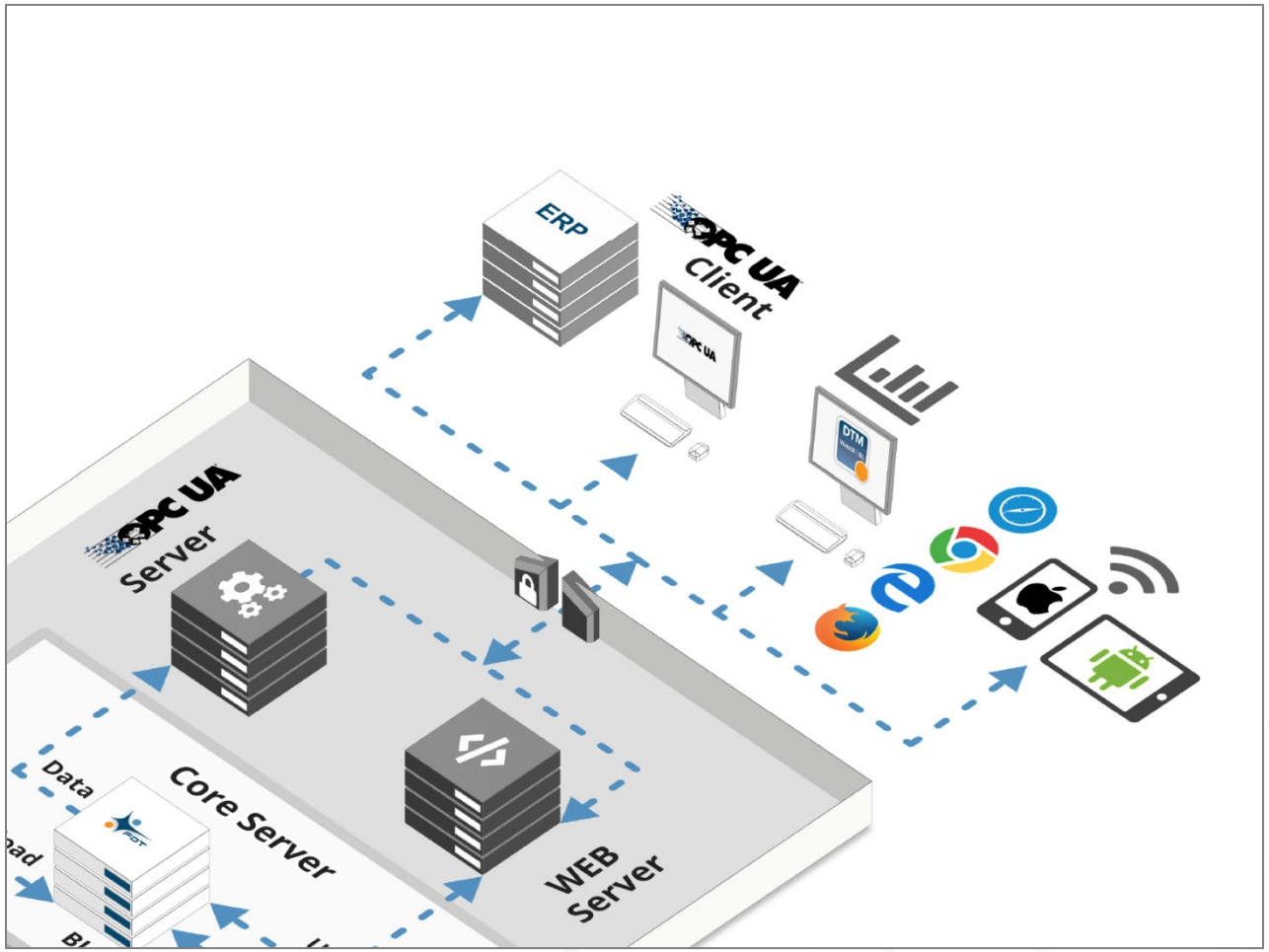
# FDT DTM Development

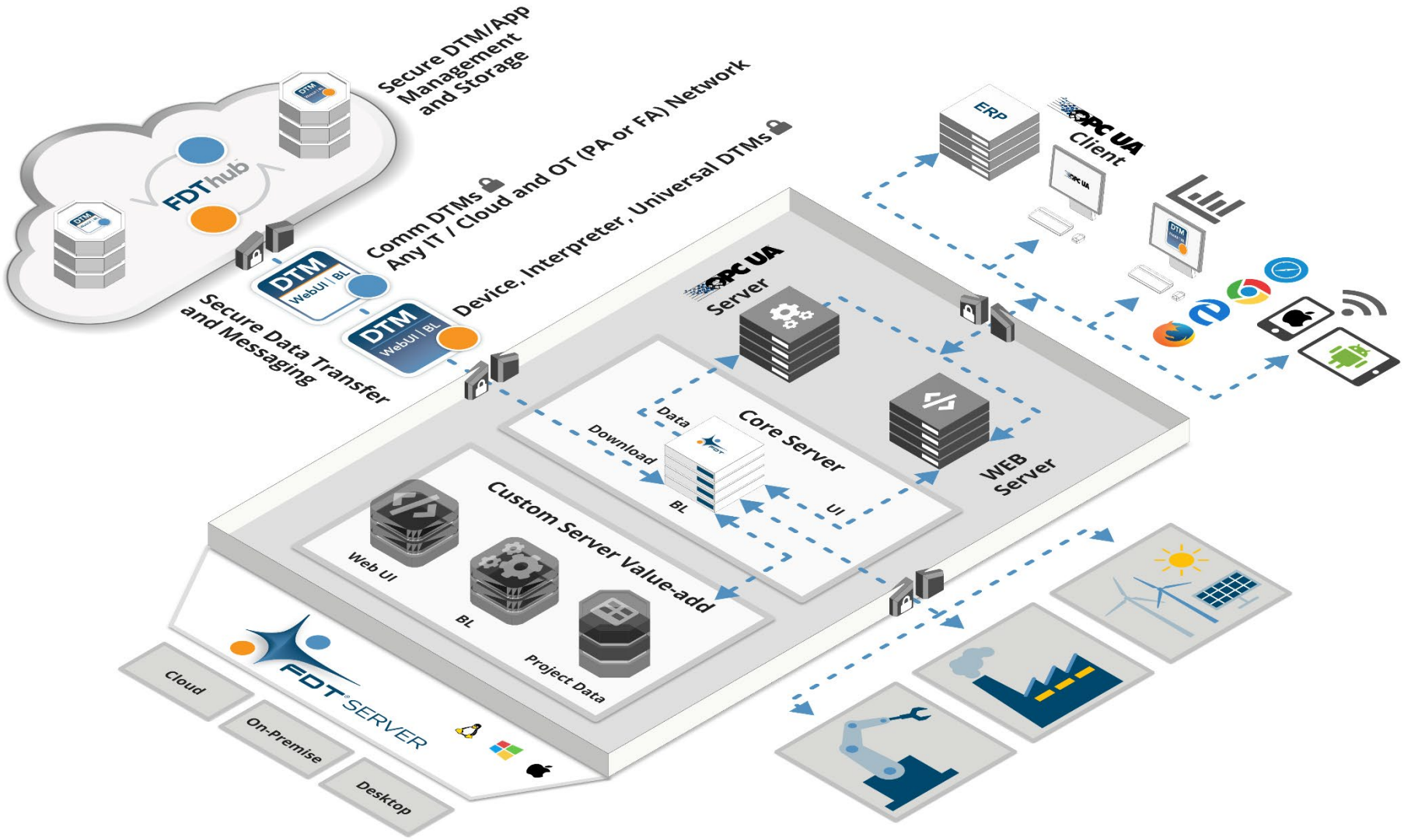



Device, Interpreter, Universal, Gateway and Communication DTMs are certified for compliance before entering the FDT*hub.*

# FDT Server™ Development

# Empowering the Intelligent Enterprise



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# ENDLESS BUSINESS BENEFITS



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# Empowering End Users

- Fully enables secure remote access of all functions
- Seamlessly integrates all industrial networks into one project view
- Scalable from skid to enterprise cloud level
- Securely access device data across the enterprise without PLC/DCS host intervention
- Supports all wireless mobile platforms for increased productivity and flexibility
- IT/OT integration
- Confidence from built-in, multi-layer security
- All certified DTMs automatically accessible from the FDT*hub*

# Enabling System and Device Suppliers

- Empowers innovative business models through scalability and flexibility
- State of the art, secure, platform independent server architecture – skid to cloud
- Multi-layer security throughout helps to protect brand value
- Platform independent OPC UA server is pre-wired into the FDT Server Common Components
- Easily integrate into larger control/asset management solution or use for standalone deployment
- FDT Desktop backwards compatibility supports the installed base

# FDT 3.0 DELIVERABLES

# Digital Transformation Starts Now with FDT 3.0

- **Standard (downloadable) – *Now Available***
  - IEC, ANSI/ISA, GB/T
- **Platform Independent Developer Tools – *Now Available***
  - FDT Server CC's
  - FDT Desktop CC's
  - FDT DTM CC's
- **Style Guide with Responsive Design – *Now Available***
- **Communication Annexes**
  - HART Annex - *in progress for release in mid 2020*
  - CIP Annex - *in progress for release in mid 2020*
  - Profibus Annex - *in progress for release in mid 2020*
  - IO-Link annex - *in progress for release in 2020*
- **IO-Link Interpreter DTM –** *July 2020*
- **Website – *Launched***
- **Brochure – *Now Available***

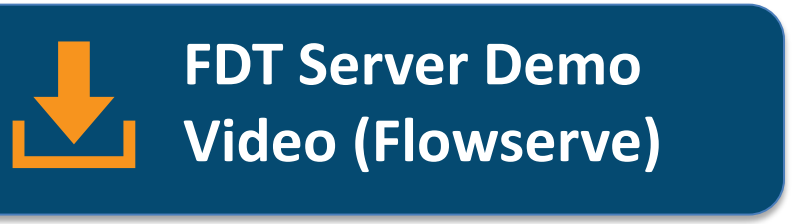
# FDT3 DEMO

# Flowserve’s FDT Server Prototype - Demo Video

# PRESS KIT

# FDT 3.0 Press Kit

- Press Release
- Power Point Slide Deck
- Brochure
- Architecture Diagram
- New FDT Icons
  - FDT Server
  - FDT Desktop
  - DTMs
  - FDT*hub*
  - dtmINSPECTOR
- FDT Logos
- FDT Server Prototype Demo Video (Flowserve)

# Thank You for Your Attention



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