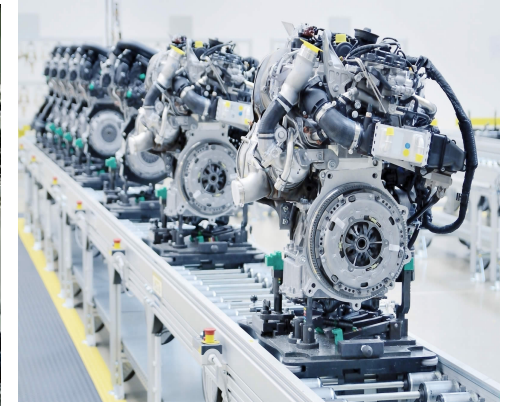




Industrial Network Systems

MOBILE USE CASES OVERVIEW



MUNICIPALITY IN INDIANA (WASTEWATER UTILITY)

Municipality in Indiana

- In service approx. 80 years
- Serves city with > 80,000 residents

Challenge

- How to deliver Mobile dashboards to users inside & outside the plant network
- Data from GE iFix SCADA and GE Historian
- Real-Time, Historical Trends and Alarms



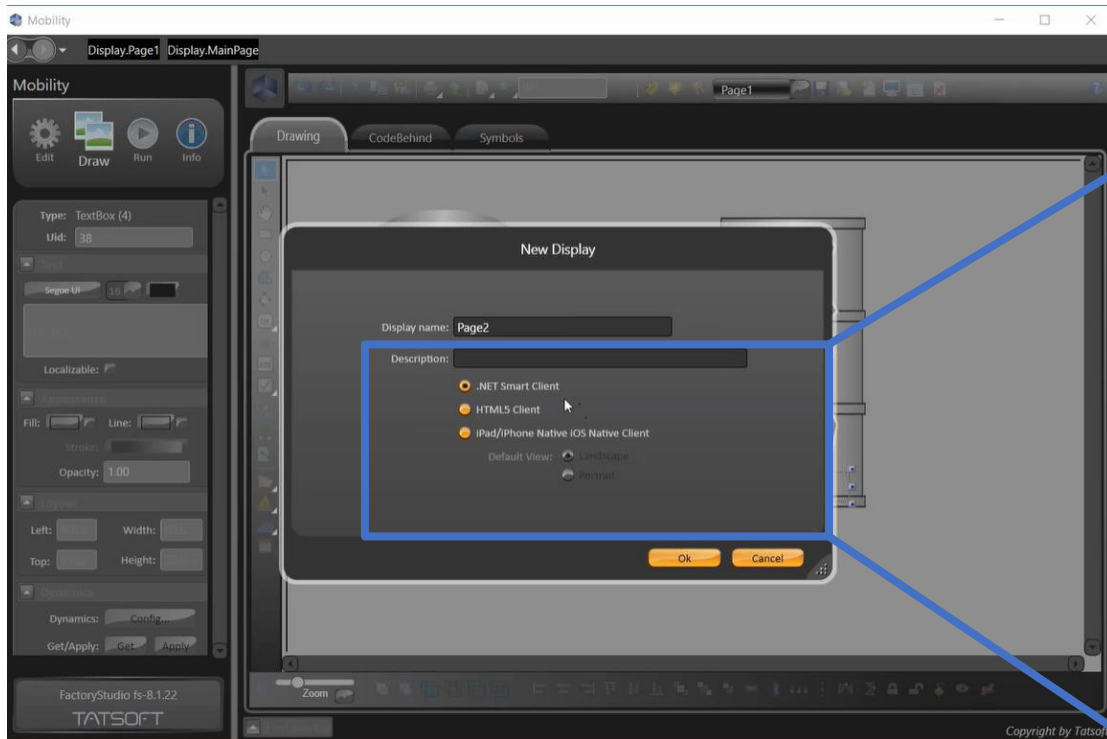
MUNICIPALITY IN INDIANA (WASTEWATER UTILITY)

Solution

- Delivered dashboards for iPhone and iPad users with a native iOS app, downloadable from the Apple App store, configured in our Windows Application
- Accessible remotely secured by built-in application security and data diode technology
- For security, only specific screens will be pushed to the iOS as “view-only” screens
- With the proper security and multi layered authentication, supervisory control and alarm acknowledgement
- Configurable interface to GE SCADA and Historian



PICKING A MOBILE OPTION IS THIS EASY! (REALLY!)



Display name: Page1

Description:

- ☒ .NET Smart Client
- ☐ HTML5 Client
- ☐ iPad/iPhone Native iOS Native Client

DESIGN A SCREEN ONCE

DEPLOY ACROSS PHONE, TABLET, & DESKTOP

- Develop the HMI Screens for use on Windows computers and then easily deploy them to iPads and iPhones as well as HTML5 without additional engineering
- Configurable designer for your graphical mobile application
- Use VB.NET or C# scripting to develop powerful flexible applications for your iOS device
- For HTML5 applications we support JavaScript



APACHE (OIL & GAS)

Apache

Apache Corporation is an Oil & Gas exploration and production company with operations in North and South America, the UK, and elsewhere

Challenge

Improve access and usage of real-time data to increase efficiency, improve performance, lower costs, make better data-informed strategic decisions in real-time



APACHE (OIL & GAS)

Solution

- We used FactoryStudio to build high- end analytic tools to aggregate, analyze, and present real-time information to both the rig and the office for real-time review and analysis
- With FactoryStudio they were able to combine high-speed data with low- latency data sources in real-time
- Loaded historical data from approx. 800 wells to help pre-load the system with valuable “lessons learned”



APACHE (OIL & GAS)

Mobile Application

- Deployed to many N.A. rig locations
- Using FactoryStudio's graphics engine enabled mobile usage via HTML5 and native iOS systems on iPads
- Mobile application was a subset of what is used in the desktop application
- Same graphics designer supports iOS
- Later phases added development of smart alarms, advisory services, and high-end analytics
- Configurable High-Performance interface to OSIsoft's PI and PI AF



RITE IRRIGATION (AGRICULTURE)

Rite Irrigation

- Irrigation system dealer and automation company
- Extensive experience in farming irrigation systems

Challenge: Mobile IIoT

- Main method of communicating with Pivots would be mobile devices (iPad / iPhone)
- Needed mobile connectivity, graphics, and reports in a single package



RITE IRRIGATION (AGRICULTURE)

Mobile Solution

- We enabled very complex animations and scripts on both desktops and natively on iPads
- Built-in SQL data-logging capabilities
- Flexibility and control in managing real-time PLC communications



CHOCOLATE MAKER

CONNECTING TO ERP WITH MOBILE APP

Problem

- Largely paper-based system of rounds and readings
- Information for decision making was not real-time
- Schedule conformance was issue with excess idle resource time
- A new implementation of SAP as their ERP forced operator interface change





CHOCOLATE MAKER

CONNECTING TO ERP WITH MOBILE APP

Solution

- Identified data sources; brought together and stored
- Applied analytics and then visualized predictable KPI's like downtime & quality events
- Delivered actionable information to iPads and smart phones, accommodating their mobile workforce

Results

- Improved schedule performance
- Double digit improvement in quality
- Double digit improvement in manufacturing efficiency
- Created ability to better manage schedule conformance
- Lowered overall production costs

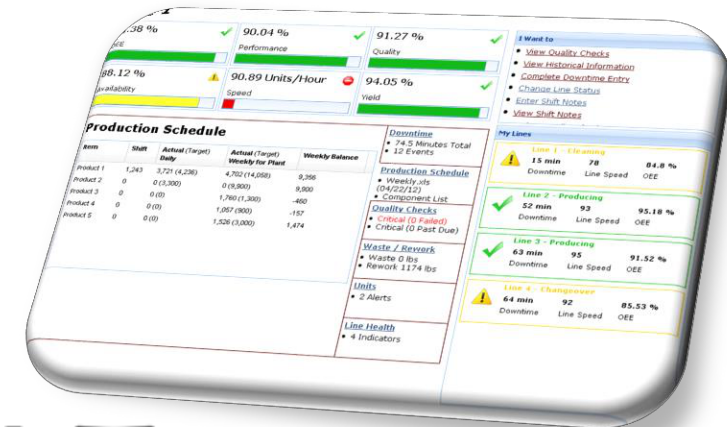
CONNECTING TO ERP

Solution

- Real-time Mobile dashboards
- The system is made up of multiple role-based dashboards.
- Dashboards were made up of several key metrics including metrics like:
 - Selectable Current Day information
 - Quality Events and Trends
 - Downtime Events
 - OEE and Line Health Activities
 - Production Schedule Details
- We delivered decision support via pc's, mobile devices like iPads and smart phones, even large flat panel displays.

Results

- Improved schedule performance
- Double digit improvement in quality
- Double digit improvement in manufacturing efficiency



INDUSTRY & TECHNOLOGY SPECIALISTS

- More than 30 years of solving efficiency, quality, and cost control problems for industrial customers like CVS, Certainteed, Sargento, Unilever and 3M
- Real-time, decision support solutions
- Leveraging industry-leading technologies developed by Microsoft, SAP, & other major companies
- Industry 4.0, IIoT, .NET, OPC

WE SERVE

- Manufacturing
- Industrial
- Water/Wastewater



HOW IT'S DONE

Flow

- Collect
- Store
- View/Analyze

Features

- Device to Enterprise
- Open and Layered
- No Rip and Replace

Functions

- On Premise
- Cloud (Public and Private)
- Remote / Mobile

ANY



Reporting



Dashboard/ScoreBoard



Analytics



ERP / Supply Chain

VISUALIZE & ANALYSE

ANY



Plant Database
TimeSeries Events



Microsoft Azure,
Tatsoft Cloud, AWS

STORE (ON PREM OR CLOUD)

ANY



Sensors



Edge
IIoT
Gateway



RFID
Barcode



Legacy
Systems



Manual



Workflow



Robot



Scale



PLCs



SCADA / HMI

CONNECT / AGGREGATE



Industrial Network Systems

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