

Turn-key IoT



The IoTize solution

IoTize mission: Connect electronics to apps & cloud



Bypass obstacles that would require years of R&D.
Connect electronics instantly to the **cloud** and to **mobile apps**.



Shared benefits

End users

Better, more user-friendly apps

Advanced features

Guaranteed cybersecurity



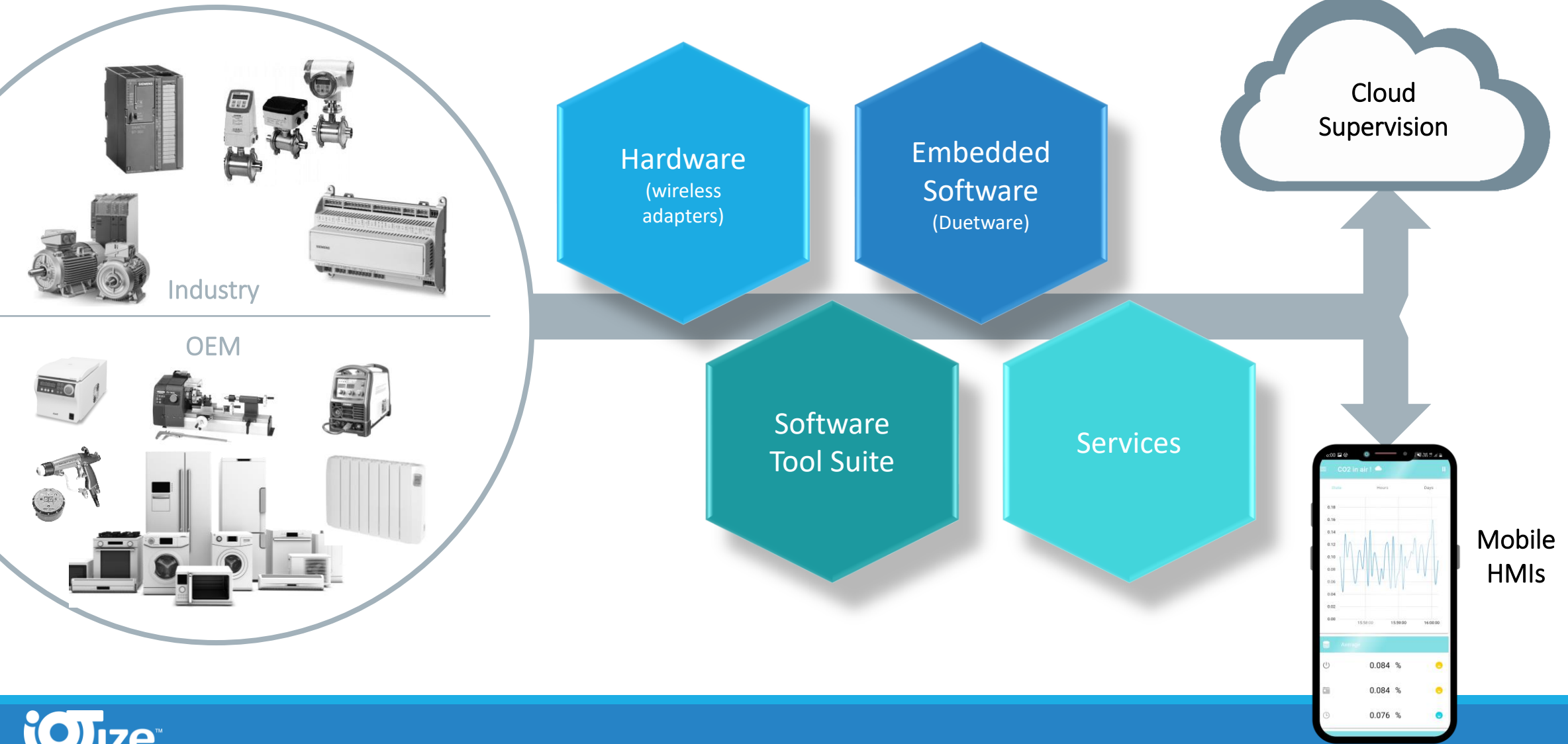
Manufacturers

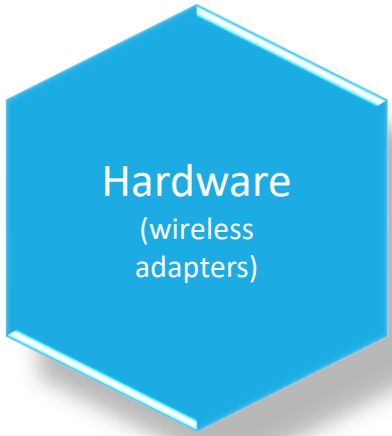
Eliminate risks, reduce time-to-market

Improve user experience

Dramatically reduce development costs

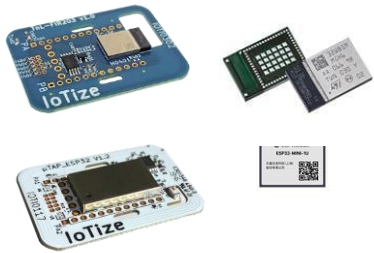
The IoTize Solution



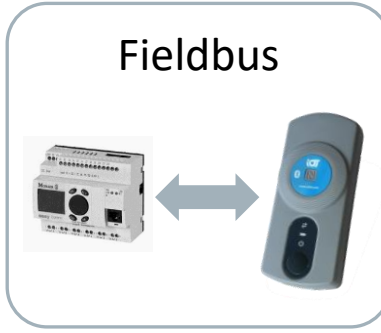
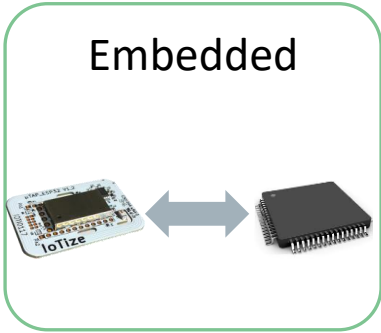


Hardware
(wireless adapters)

OEM



TapNLink &
3rd-party modules



TapNLink

Tapioca &
TapNPass

App Generator (APIs)

Configuration Tools

Java Tools

Firmware (Duetware)

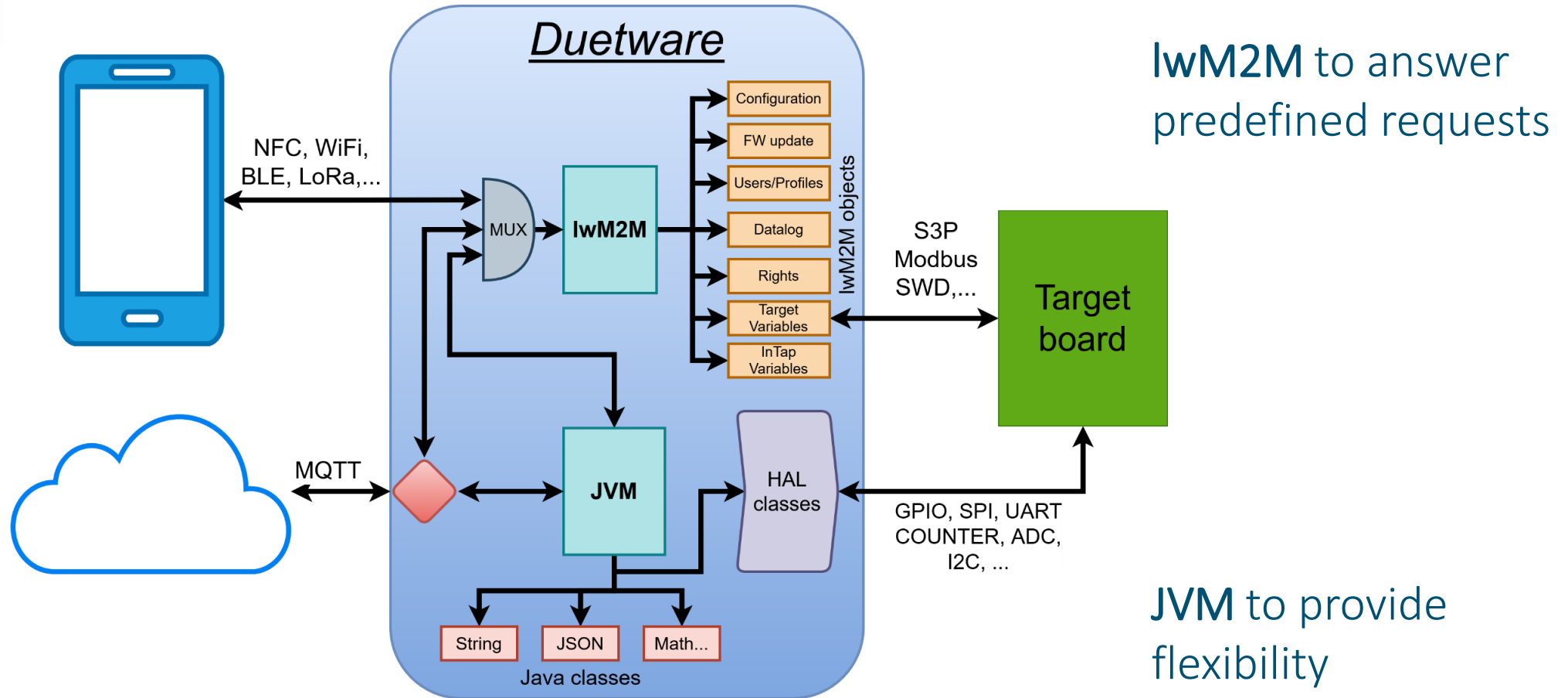
Industry
& HVAC



Gateways to
mobiles or Cloud

Embedded Software
(Duetware)

Powerful, flexible dual-machine firmware





Software Tools

New ▶

Tool	Platform	Use
App Editor	Server app	Create an enhanced mobile app.
App Generator	Server app	Generate Ionic project, then an APK or IPA.
Tap Manager	Mobile app	Universal, adaptable mobile app.
IoTize Studio	Win exe	Device and HMI configuration, test. CLI utilities (command line).
Java Debugger	Win exe	IDE with Java development suite: IDE, linker, debugger

Embedded Software
(Duetware)

Solution software bricks

Operating System		
lwM2M	Variables	String/JSON
	User profiles	Comm/HAL
	ACL	Math
	FUOTA	lwM2M command
	Certificates	MQTT/Socket
		Java Virtual Machine

Protocols		
Communication	TCP/IP	SSL
	MQTT	SCRAM
	CoAP	Signed Single Packet
	LoRaWAN	
		Security

Wireless Comm.		
Short range	NFC	LoRa
	BLE	LTE-M
	Wi-Fi	NB-IOT
	Zigbee	
		Long range
		Thread

Wire Comm.		
Serial	USB	Modbus RTU
	RS232	Modbus TCP
	RS485	CAN
	Ethernet	SWD
	SPI	SPI
	CAN	

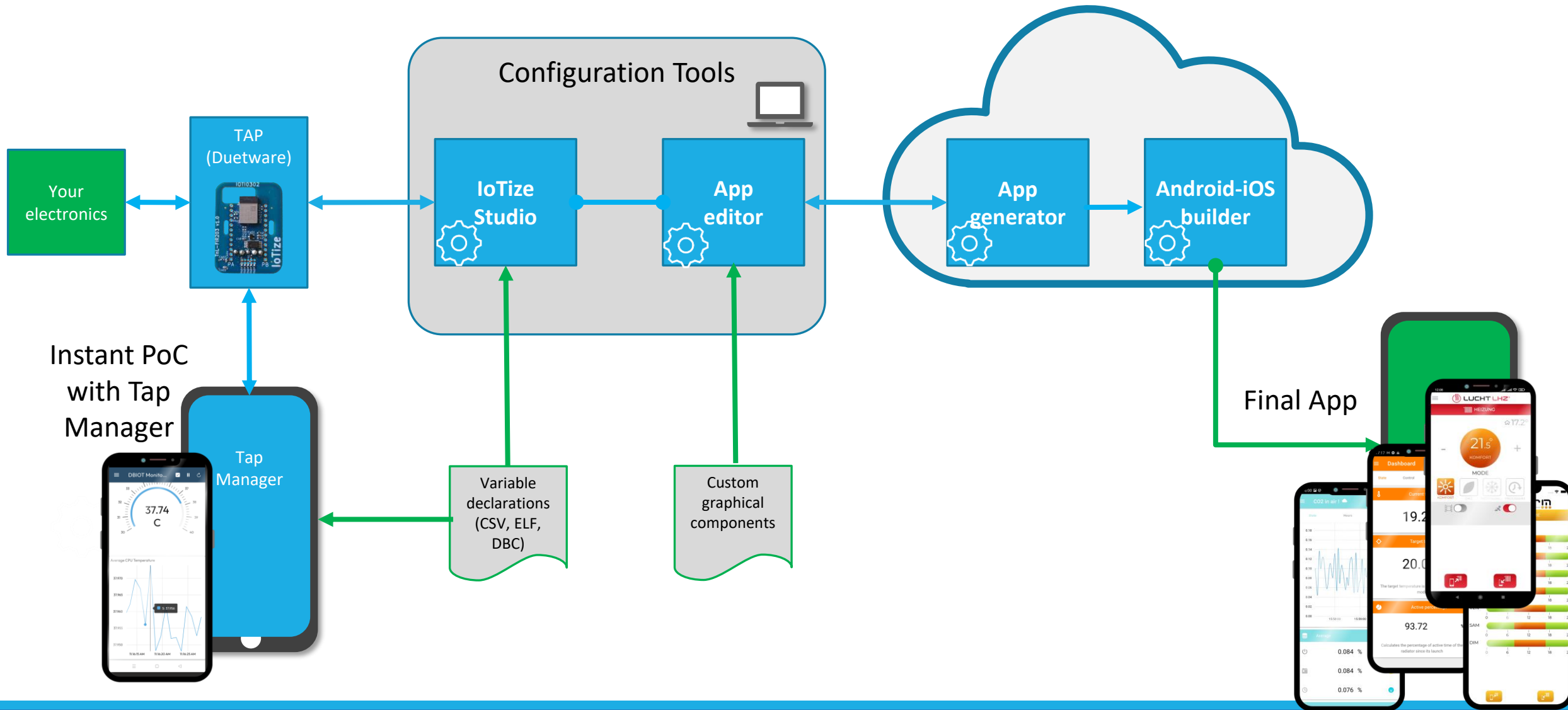
Software Tools		
Configurator & Generator	Format loader (ELF, DBC, ...)	IDE
	Config. editor, loader	Static linker
	Tester	Simulator
	App generator	Real time debugger

Mobile Apps		
Languages & OS	Java	Graphic elements
	Android	Utilities
	iOS	Client protocols
	Node	
		App generator libraries

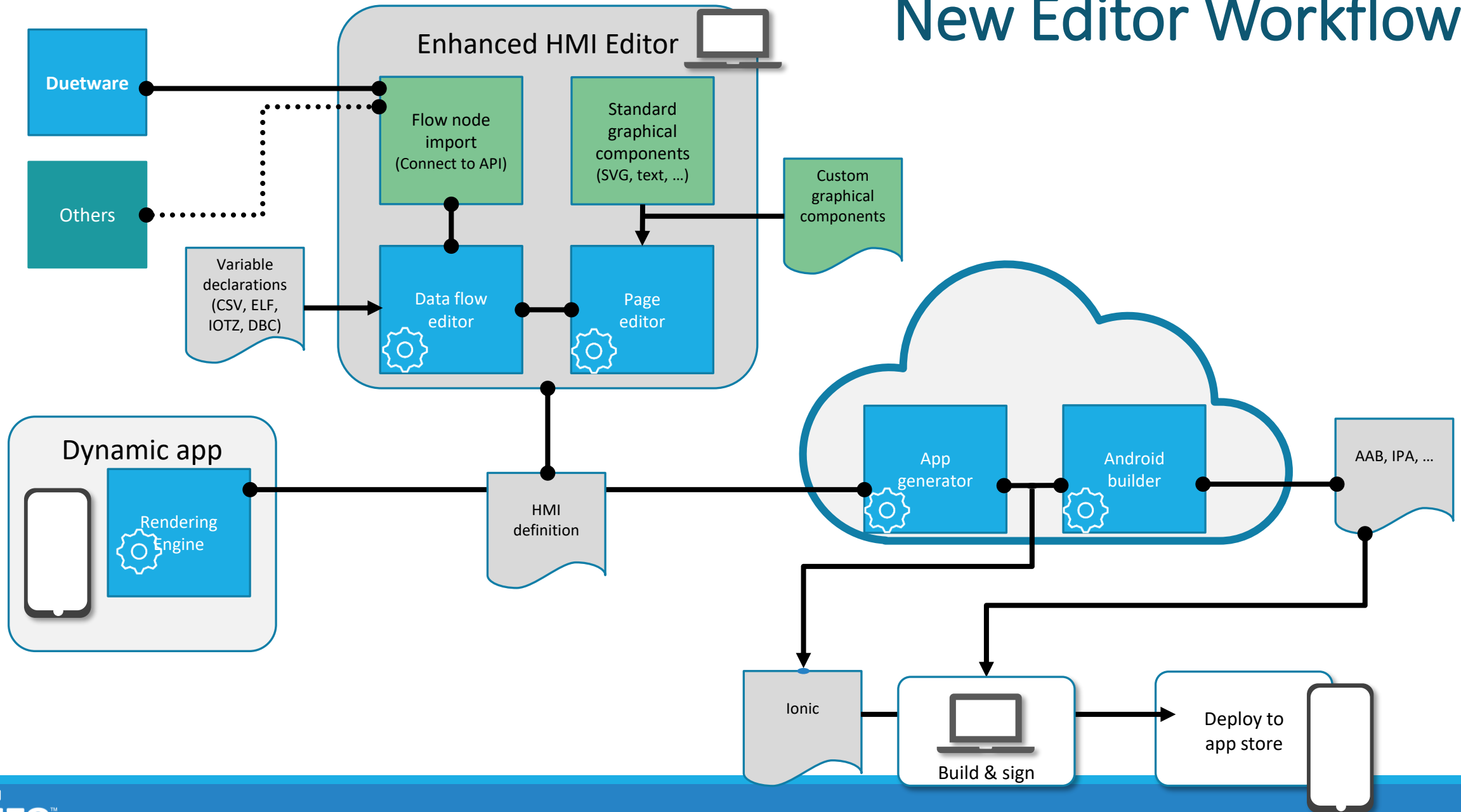
Software Tool Suite

New Enhanced HMI Editor

“No Code” software Solution



New Editor Workflow



App Editor:

Main characteristics



Interactive

WYSIWYG, drag and drop,
No Code/ Low Code



Open

API to import graphical components
and dictionaries of variables

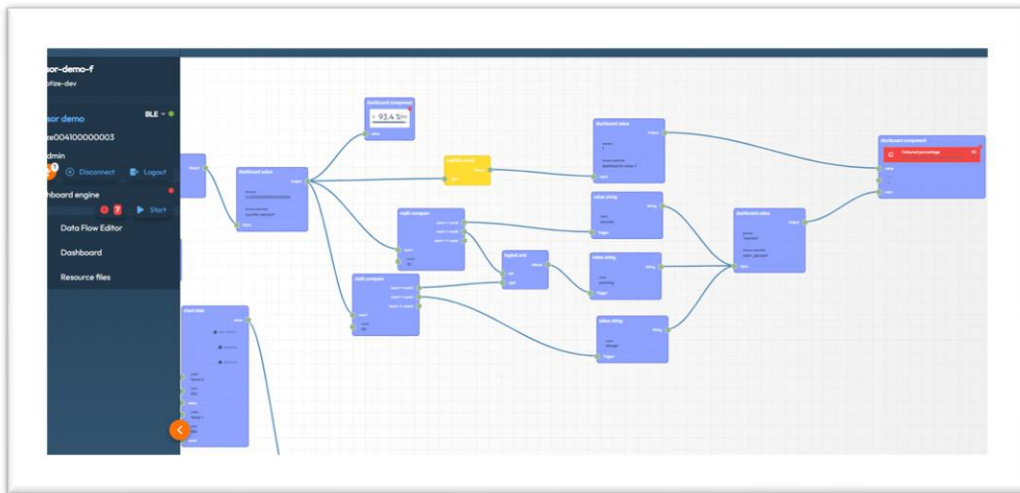


**Manages
complexity**

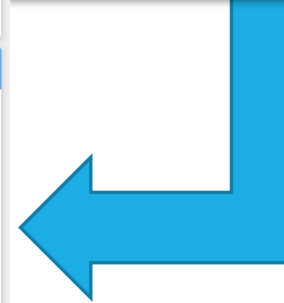
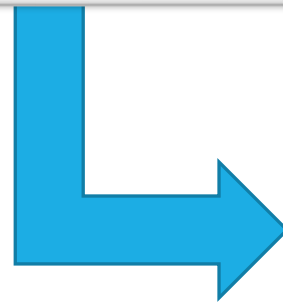
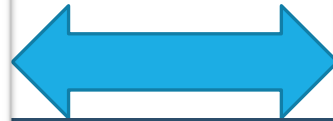
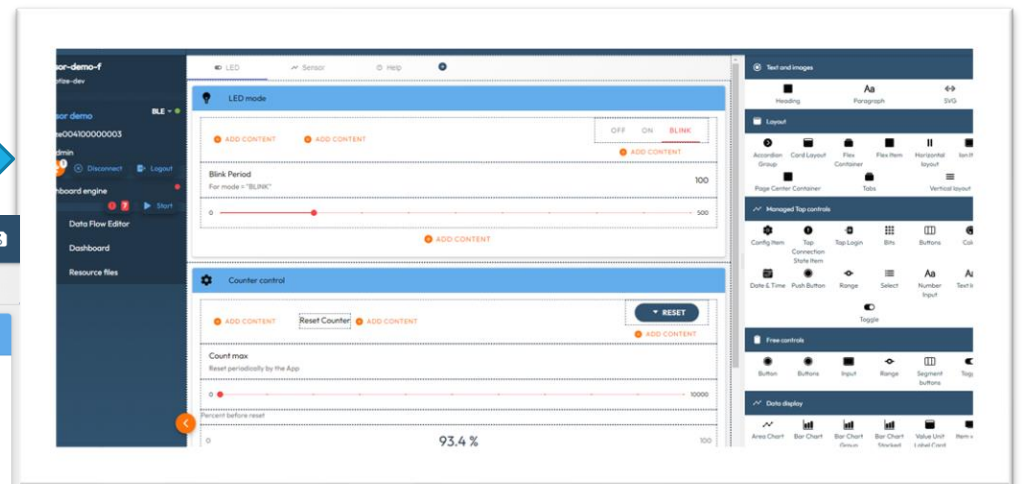
Mix of data, timing, actions, colors,...

App Editor Suite: Two complementary tools

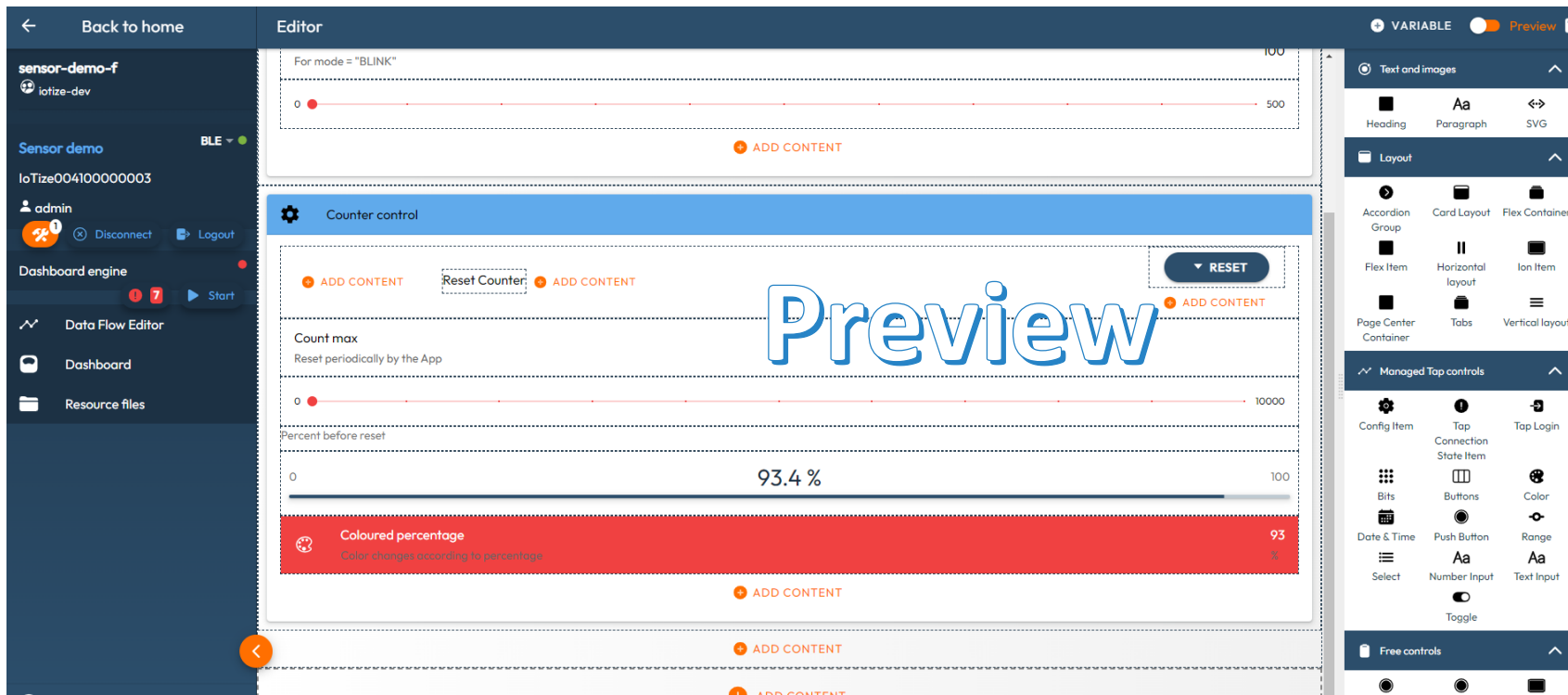
Flow Editor: How it works



Page Editor: How it looks



Page Editor: Construct each page of the HMI



Components

Page Editor: Layout view to organize page contents

Components

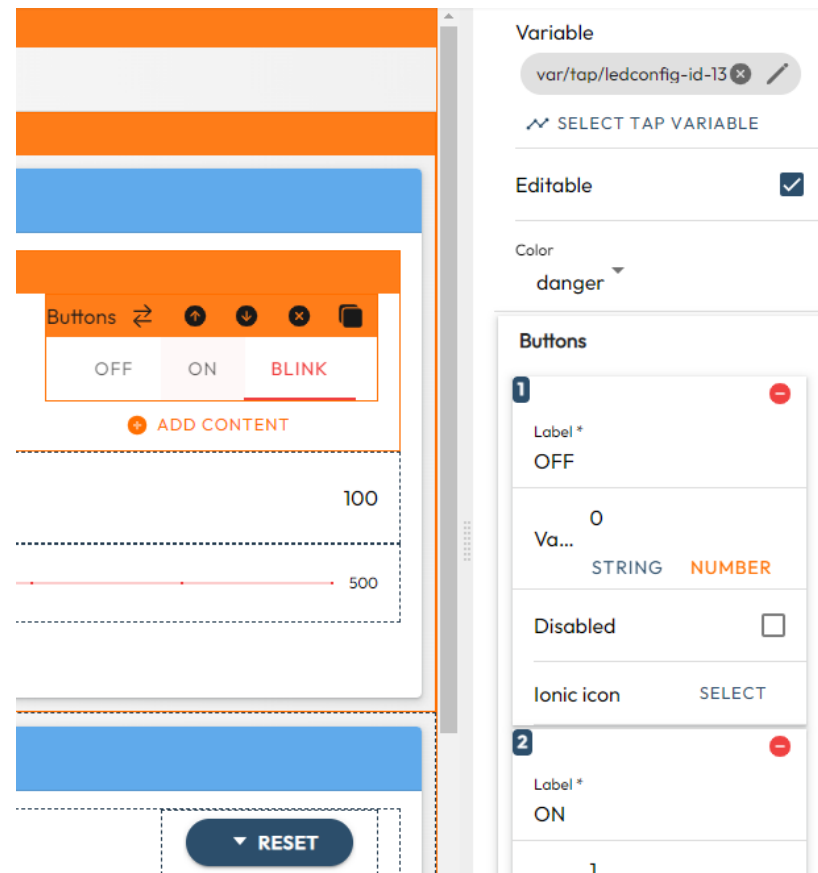
Static HMI Items

Layout & organization

Machine HMI (r/w)

The screenshot displays the IoTize Page Editor interface. On the left is a dark sidebar with navigation options: 'Back to home', 'sensor-demo-f', 'BLE', 'Sensor demo', 'IoTize004100000003', 'admin', 'Disconnect', 'Logout', 'Dashboard engine', 'Data Flow Editor', 'Dashboard', and 'Resource files'. The main editor area shows a 'Nested Layout' with a 'Flex Container' containing two 'Flex Items'. The first item is a 'Temperature' gauge showing 27.4 °C, and the second is a 'Voltage' gauge showing 3.27 V. Below these is a 'Preview' area showing a line graph with a blue waveform. On the right, a 'Components' panel is open, listing various HMI items such as 'Text and images', 'Layout', 'Managed Tap controls', and 'Machine HMI (r/w)'.

Page Editor: Edit HMI components



Configure
each
component

Page Editor: Real time test

& Test with Tap Manager

Try the Primer Kit from IoTize

Control your electronics with mobiles

- Easy hardware integration
 - Multiple wireless protocols: NFC, WiFi, BLE, LoRa, LTE-M, etc.
 - Multiple wire protocols: SWD, UART (modbus), SPI, CAN, Ethernet,...
- No code solution: this App controls the Primer kit without writing a line of code!
- Full featured tools suite
 - Embedded Java Machine for instant Cloud integration,
 - Automatic App Generator (for iOS, Android, Web App,...),

Visit us at www.iotize.com

Real time evolution

Temperature: 29.0 °C

Voltage: 3.27 V

Preview
with App Editor

Monitoring

Real time evolution

Temperature: 33.0 °C

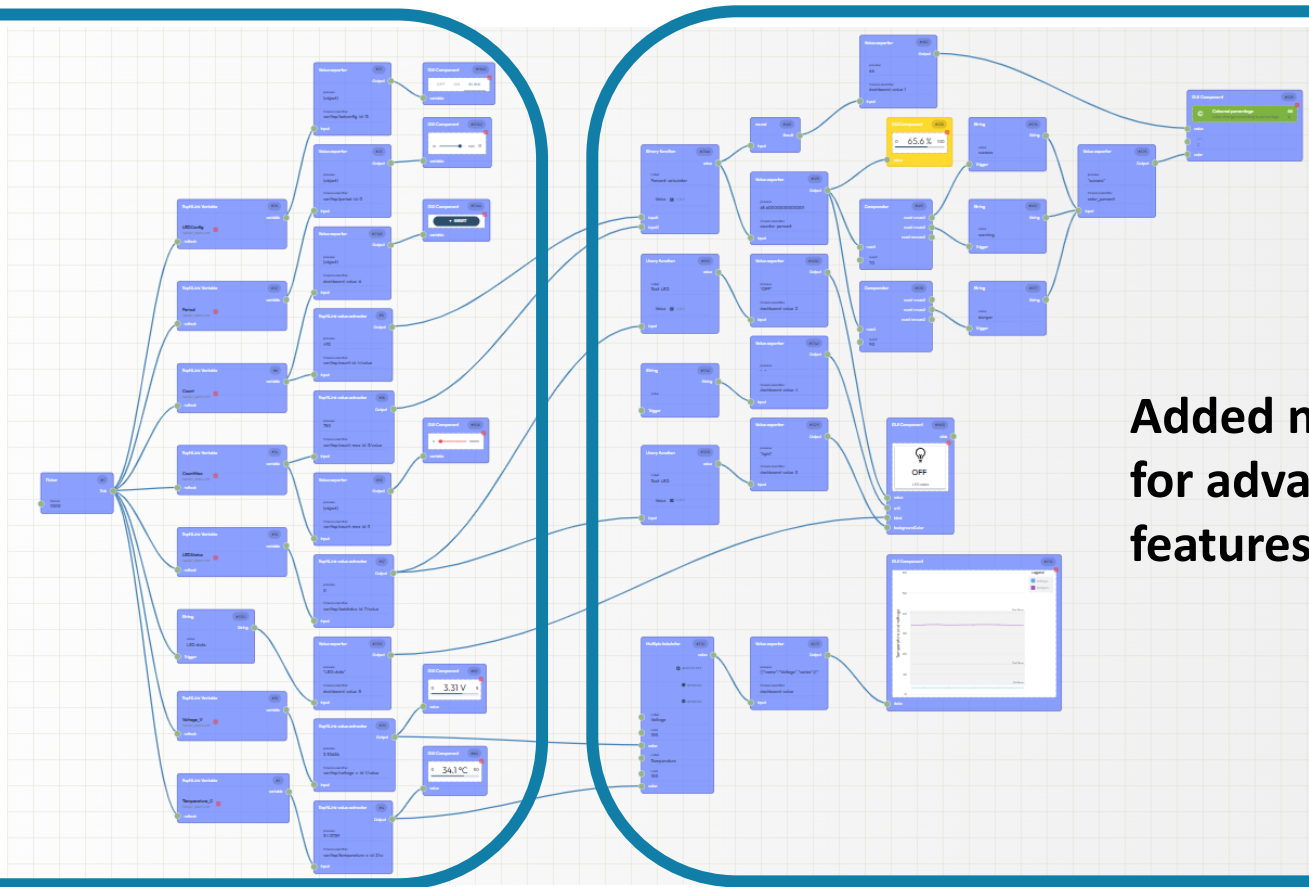
Voltage: 3.31 V

ature and voltage

Flow Editor:

An optional tool for advanced features

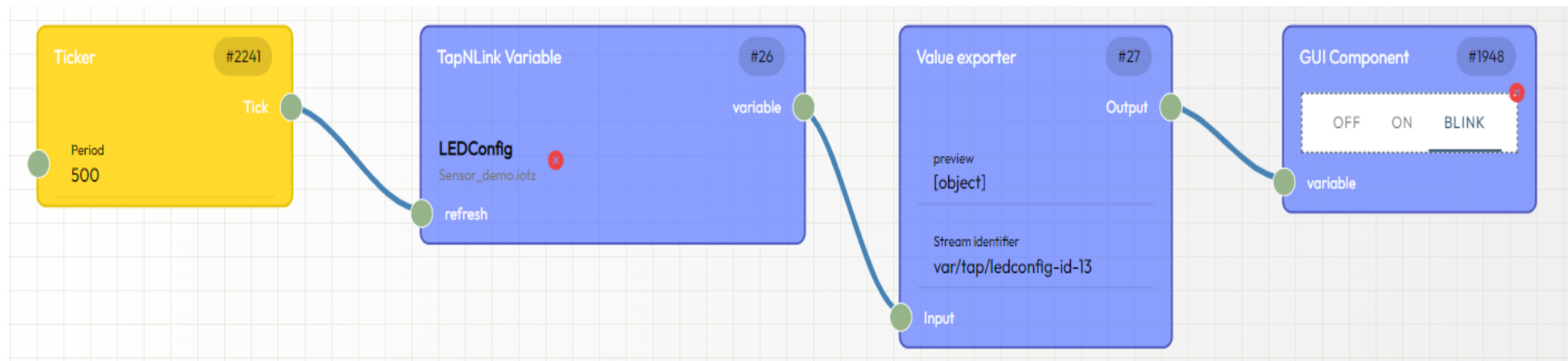
**Nodes
automatically
generated**



**Added nodes
for advanced
features**

Flow Editor:

Driving the data from the hardware to the dashboard



Flow Editor: Node types

delay #2336

Time Value

Delay (ms)
2500

Input

Toast #2337

Special HMI message

duration
2000

color
warning

Trigger

Division #2338

Formula Result

left
NaN

right
NaN

Multiple tabulator #2339

Data collection value

ADD ENTRY

REMOVE ENTRY

Label
Value 0

Limit
30

data

lwM2M #2340

Low level command Result code

Raw body

Error

GET

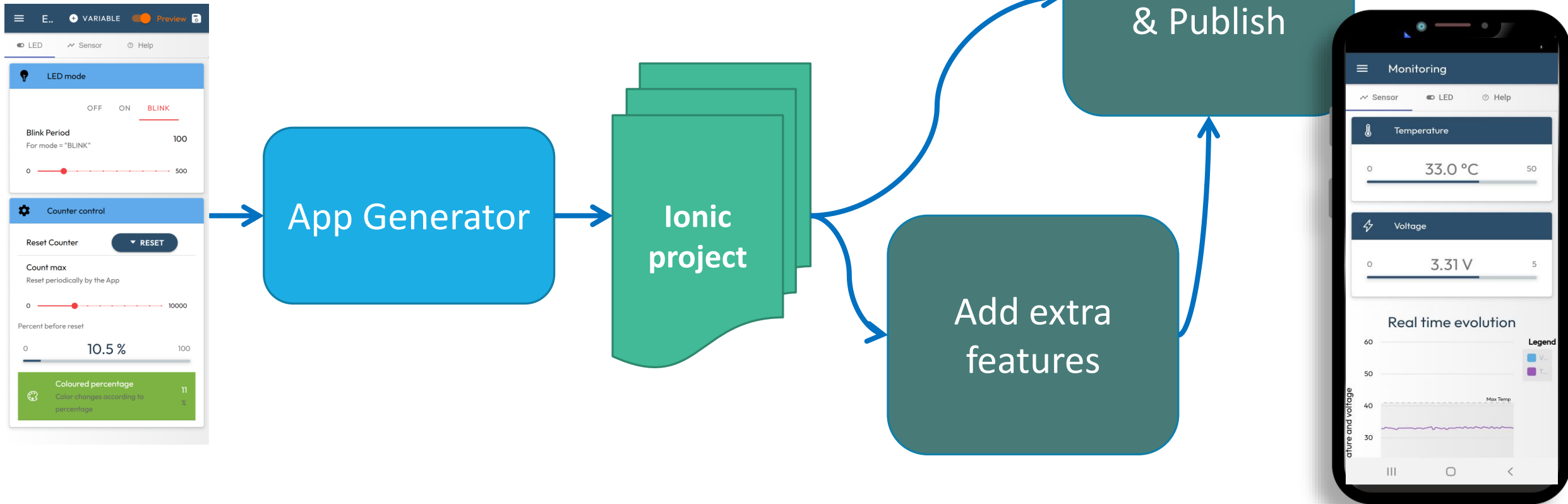
path

Trigger

3 steps

Step	Context
Preview	<ul style="list-style-type: none">• Immediately in the Dashboard Editor• WYSIWIG edition
Dynamic Test	<ul style="list-style-type: none">• With a dynamic App (Tap Manager or equivalent)• Multi-device, multi-HMI, ...
Static App	<ul style="list-style-type: none">• Specific to one (or a few devices)• Customer dedicated App (published or not)

Last Steps: From the tools to the stores



Use cases for a dynamic App + App Editor



Annex Slides

Location of the HMI Storage: PROS and CONS

