Turn-key IoT


77 %
CONFIGURE
TEMPERATURE LEVEL
Local Configuration
NFC - Bluetooth - WiFi
Monitoring via Cloud
WiFi - LPWAN - GSM

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

Unique Features

Automatic Mobile App Generator

(or universal, adaptable App)

Instant connection to microcontrollers

(patented) or industrial equipment

Smart use of NFC combined with other RF protocols (BLE,WiFi, Lora, LTE …)

The only global solution that manages the App, the Cloud, the cybersecurity, the radio, the user's rights, etc...

A huge, growing market

Forecst 2030 : estimated market of 75 billion devices

Three priority markets	European Union (million units)	Worldwide (million units)
HVAC (without water heaters)	20	100
Industrial equipment	15	80
Domestic appliances	410	1600
Totals for these markets:	445	1780

‘Miscellaneous’ targets are even more numerous:
smart sensors, pumps, metering, electric tools, …

The Team

Maël COLAS
General Manager, HEC Paris

Previously managing director and partner of CEFI, an integrator of high value-added IT solutions, 15 years of management at SFR

Francis LAMOTTE
President, Mines Paris

Founder Iotize in 2017, previously founder and CTO of Keolabs/Raisonance, expert in wireless technologies and software solutions for microcontrollers.

Steve GUSSENHOVEN
Marcom Manager

University of Idaho, Former Marketing Communication Manager for Keolabs and Raisonance

Stéphane LEONARD
CTO, Ensimag

Previously co-founder of a startup developing mobile applications in events, then freelance developer.

Eduardo Trejos
Sales Manager

University of Texas and Grenoble Ecole de Management, Sales manager for Bonitasoft

Customers (among others)

Schneider Electric

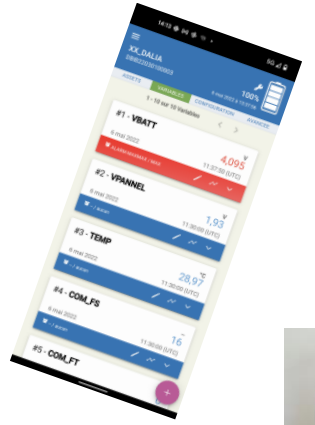
Air Liquide

Cotherm

Two ‘SE branded’ products made By IoTize : Bluefer and Wifer

Use of our ‘Tapiocas’ and Apps

Software Licensing for electric heaters.



International recognition

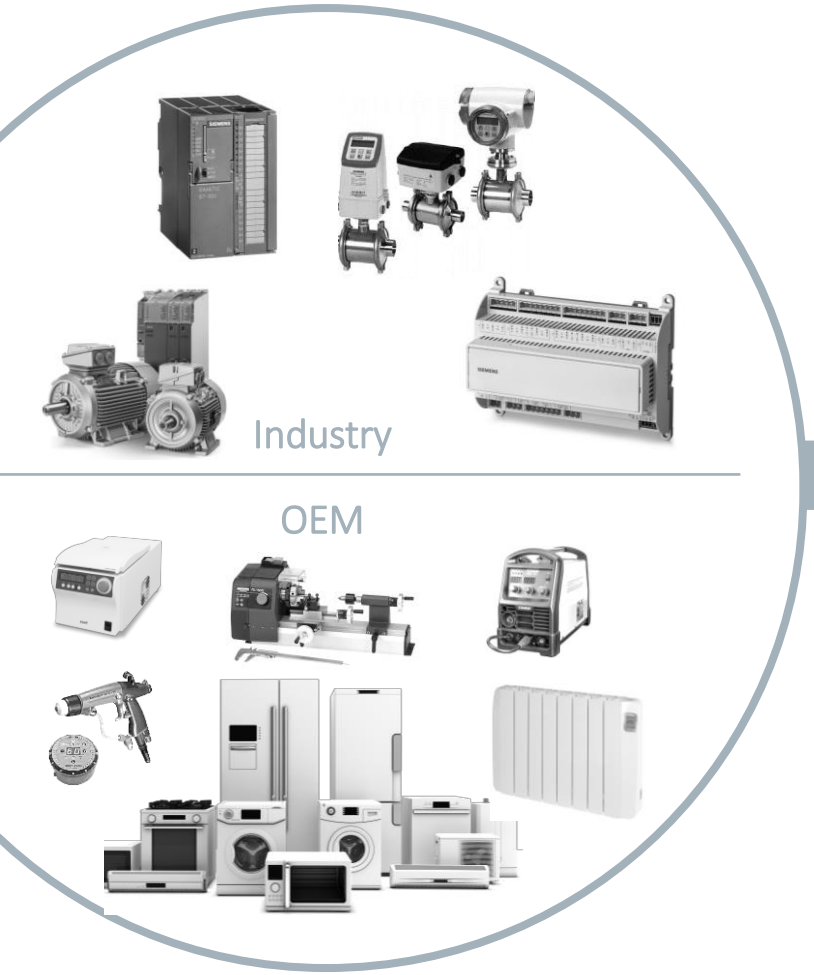
Embedded systems
Innovation of the year

Cartes: Smart card & cybersecurity
The IoT solution of the year

NFC Forum
Best Emerging Concept 2018
Best NFC application 2020

Cover of EE Times

The IoTize Solution



Hardware
(wireless adapters)

Embedded Software
(Duetware)

Software Tool Suite

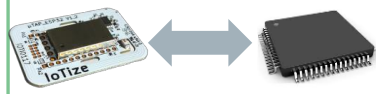
Services

Cloud Supervision

Mobile HMIs

Hardware
(wireless
adapters)

Embedded



Fieldbus

TapNLink

Tapioca &
TapNPass

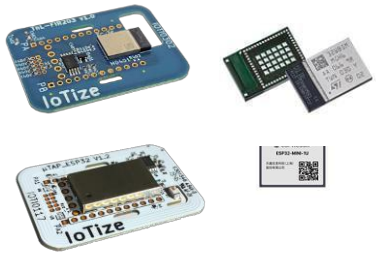
App Generator (APIs)

Configuration Tools

Java Tools

Firmware (Duetware)

OEM



TapNLink &
3rd-party modules

Industry & HVAC

Gateways to
mobiles or Cloud

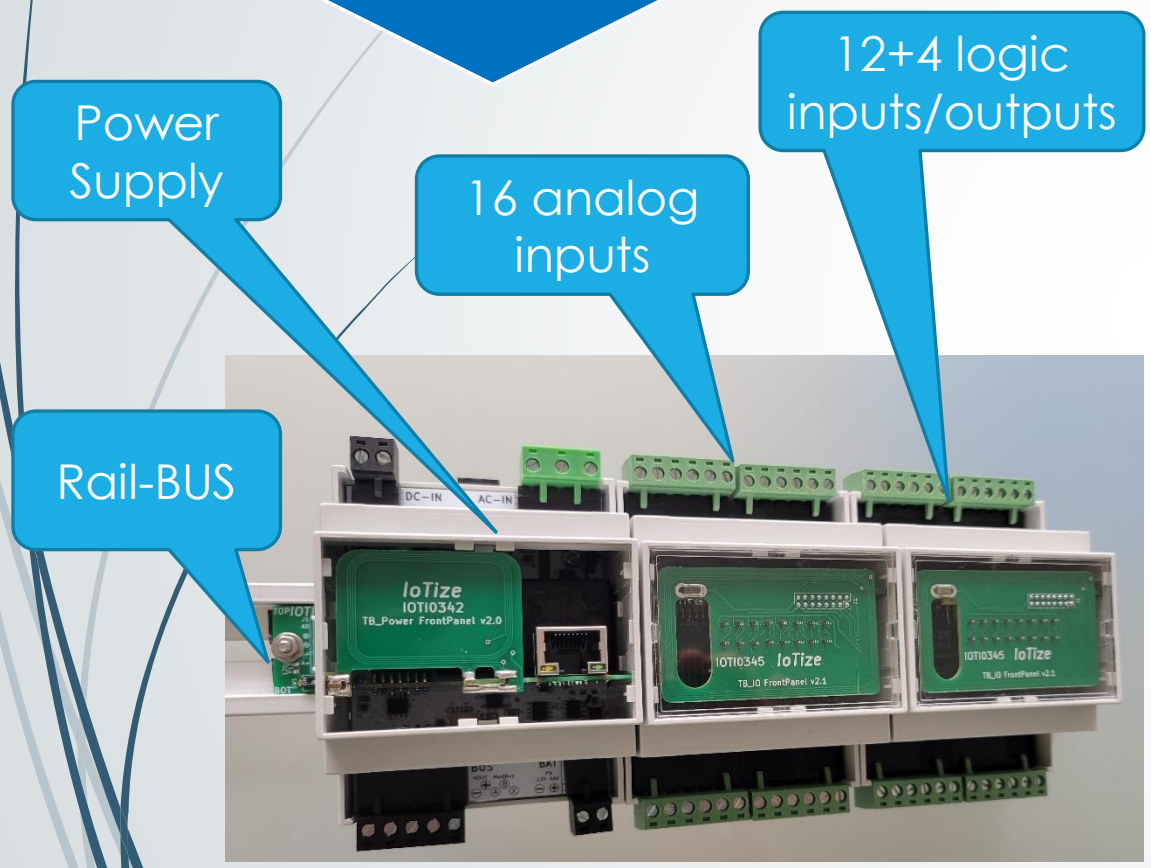
Hardware
(wireless
adapters)

The Tapioca series

		Local wireless channels: **NFC + BLE + WiFi**			
				+ Long range channel	
		Standard casing	IP67 casing	IP67 with **LoRa**	IP67 with **LTE-M/NB-IOT**
Wire connectivity	**RS-485**	TpC-FS4W123	TpC-PS4W123	TpC-PS4L123	TpC-PS4M123
	RS-232	TpC-FS2W123	TpC-PS2W123	TpC-PS2L123	TpC-PS2M123
	USB	TpC-FS0W123	TpC-PS0W123	TpC-PS0L123	TpC-PS0M123
	CAN 2.0	TpC-FC0W123	TpC-PC0W123	TpC-PC0L123	TpC-PC0M123
	Ethernet	TpC-FE0W123	TpC-PE0W123	TpC-PE0L123	TpC-PE0M123
	RS-485 + Ethernet		TpC-PE4W123	TpC-PE4L123	TpC-PE4M123

TapBus: a new family for the Industrial IoT

Hardware: wireless adapters



- Powered by Duetware,
- Configurable by Studio, App Creator…
- Java allows simple automation and easy connectivity to Cloud platforms.
- Modules linked by Modbus,
- Optional rail for modbus+power distribution (or alternative with ribbon cables).
- Automatic addressing (simplified modbus configuration)
- 3 DIN-rail modules types:
  - Power supply (integrate a RS485+Ethernet Tapioca) with battery management,
  - Logic: 12 Inputs + 4 outputs.
  - Analog: 16 Inputs.
- Input voltage: AC-220V or DC-24V (up to 36V),
- Output: 5V or 12V (20W)
- Optional LoRa and LTE-M (extension boards for the power supply module)

Samples in 2023Q3

Hardware: wireless adapters

TapBus family: industrial IOs modules

Logic (LI1204)	Analog (AI16)
12 inputs + 4 outputs	16 inputs
NFC + Modbus connectivity	NFC + Modbus connectivity
Outputs: electronic switches State, pulse or PWM	ADC: 24 bit (typ. Accuracy < 0.1%)
Configurable inputs: digital, timer or counter (sampling @1kHz)	Configurable inputs: 4-20mA, 0-10V, 0-2V, Pt100/Pt1000 (2 or 3wires)
Standlone mode (NFC only) or modus server	
Power supply: 5V or 12V (from 4.5V to 15V)	
Embedded Java + Duetware	

Samples in 2023Q3

Hardware: wireless adapters

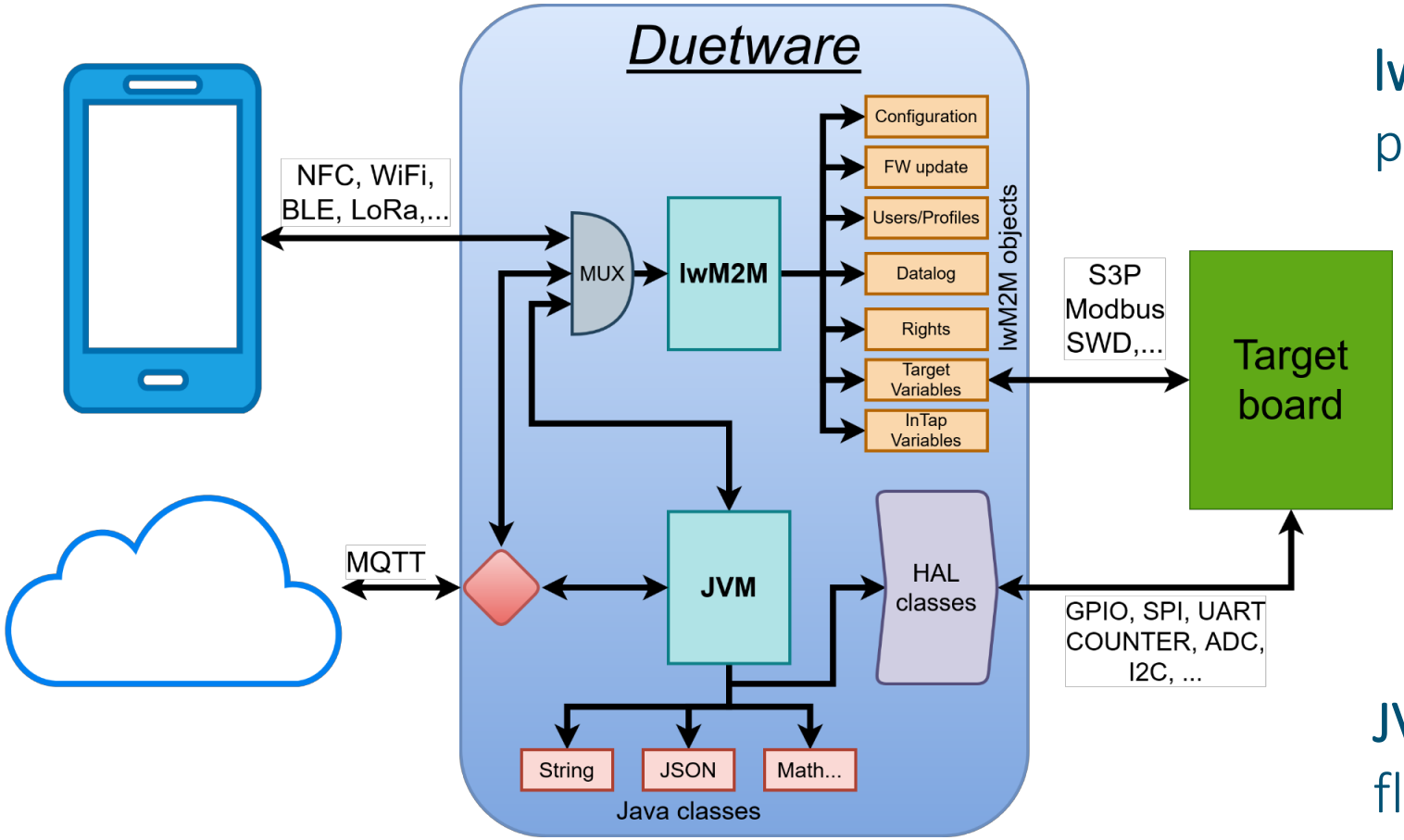
TapBus Power

Wire connectivity: RS485 + Ethernet
Wireless connectivity: NFC + BLE + WiFi
Input voltage: AC 230V or DC 24V
Output Voltage: DC 12V or 5V (20W)
Connectable to other modules via RailBus or ribbon cable (picoflex)
Battery suoervision: charge, recharge and test ((4-8 Ah, lead battery)
Drive up to 64 IO modules.
Available options: • modem for LoRa • Modem for LTE-M / NB-IoT

Samples in 2023Q3

Embedded Software
(Duetware)

Powerful, flexible dual-machine firmware



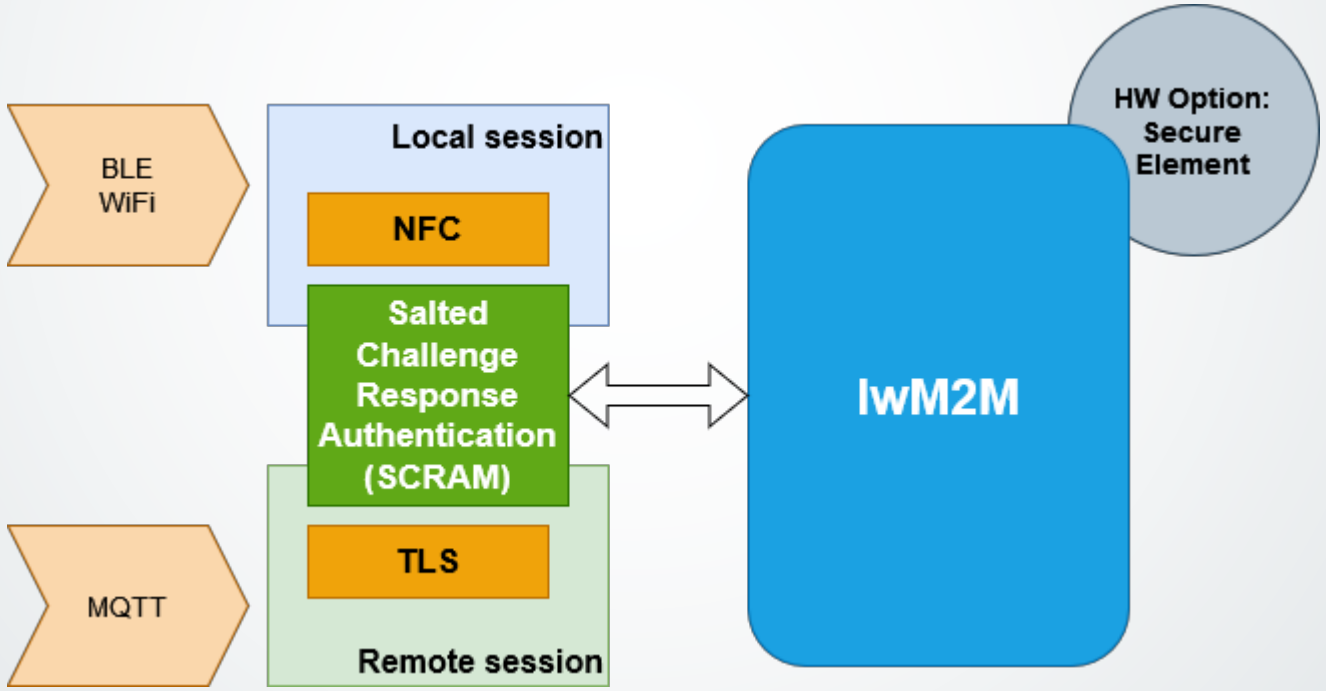
lwM2M to answer predefined requests

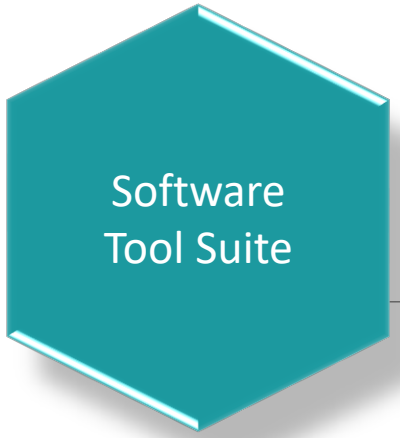
JVM to provide flexibility

Cybersecurity

Dual layer: SCRAM reinforced by TLS and NFC

Embedded firmware: Duetware





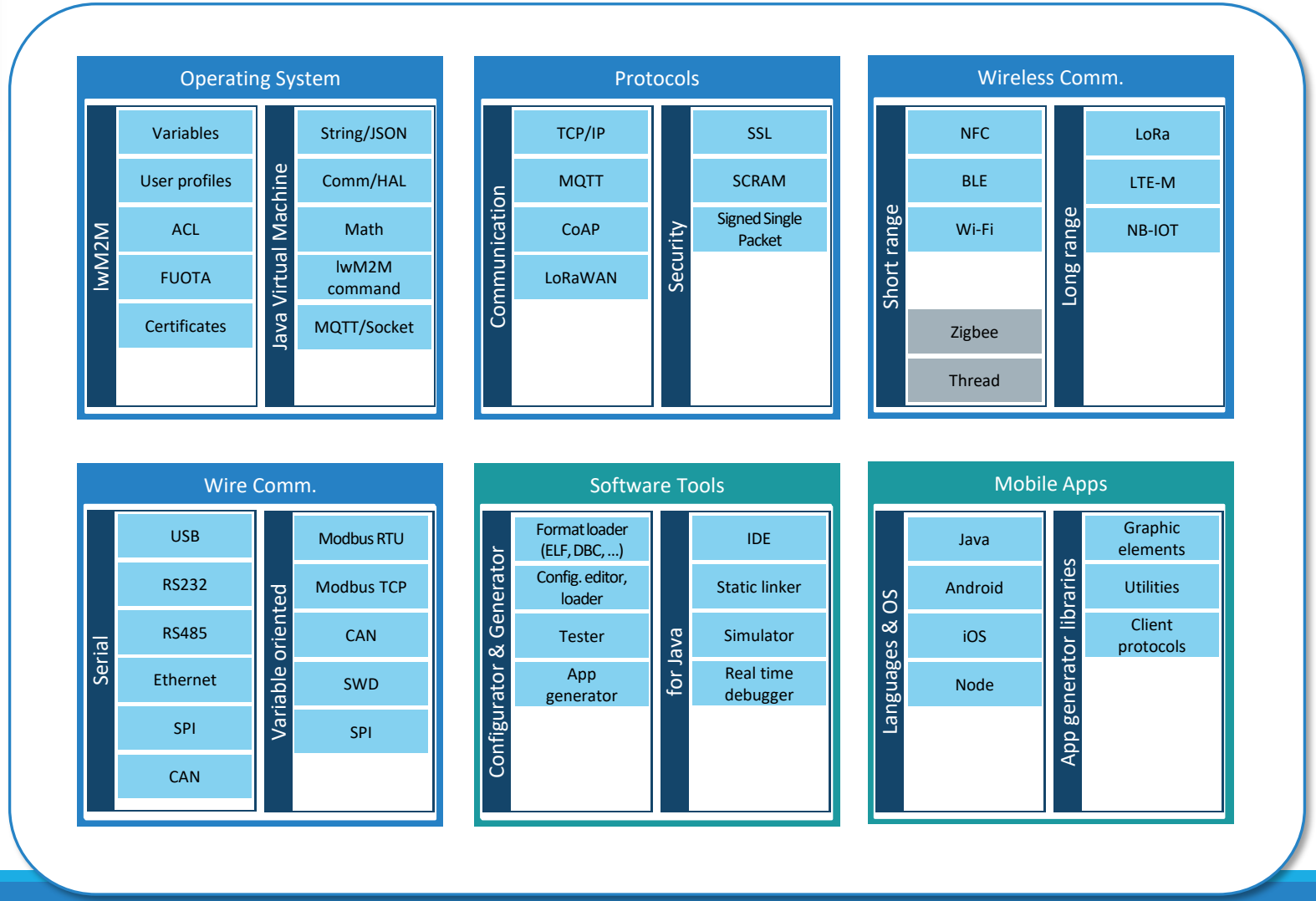
Software Tools

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

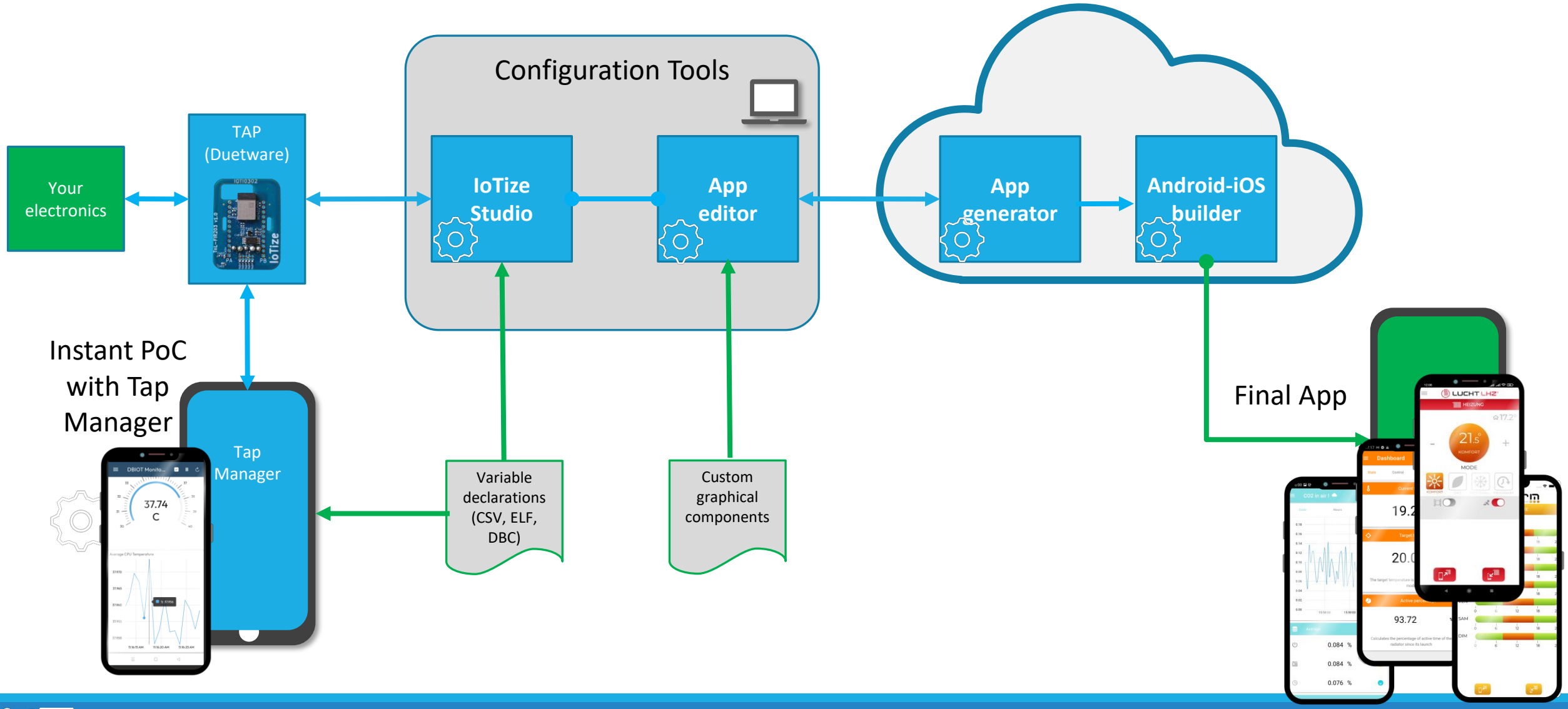
Embedded Software
(Duetware)

Solution software bricks

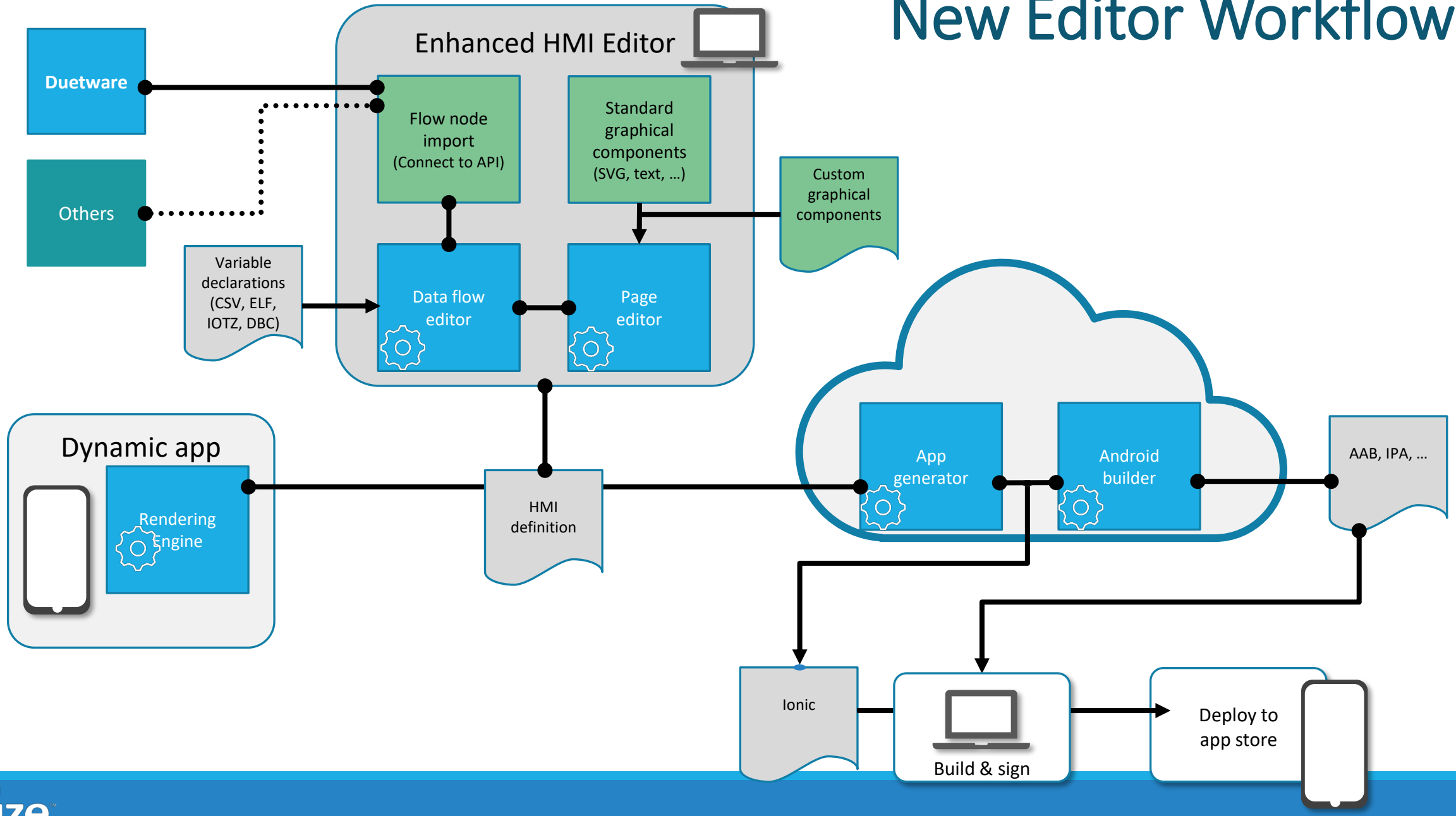


Software
Tool Suite

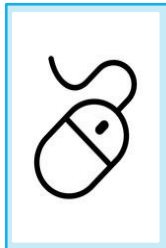
“No Code” software Solution



New Editor Workflow



App Editor:
Main characteristics



Interactive

WYSIWYG, drag and drop,
No Code/ Low Code

Open

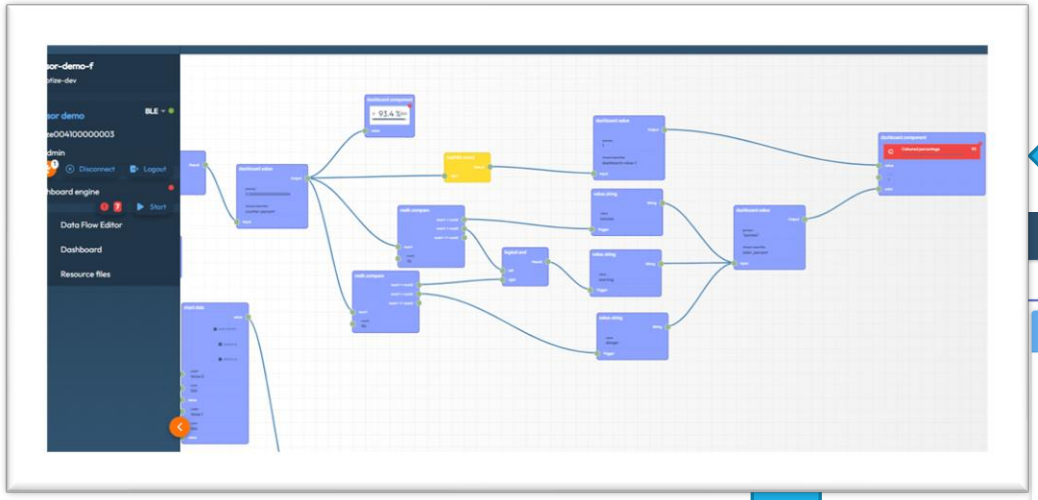
API to import graphical components and dictionaries of variables

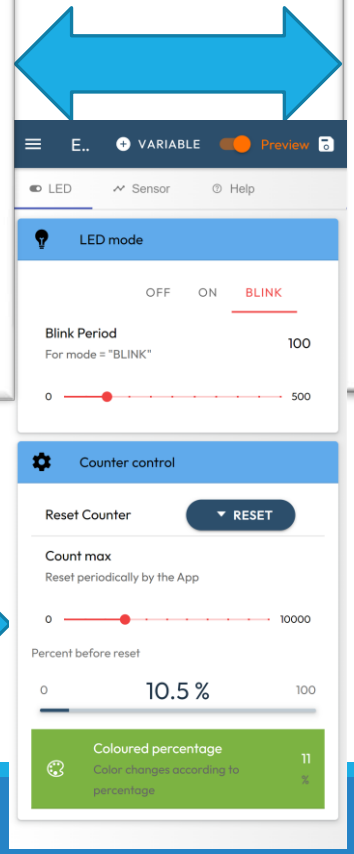
Manages complexity

Mix of data, timing, actions, colors,…

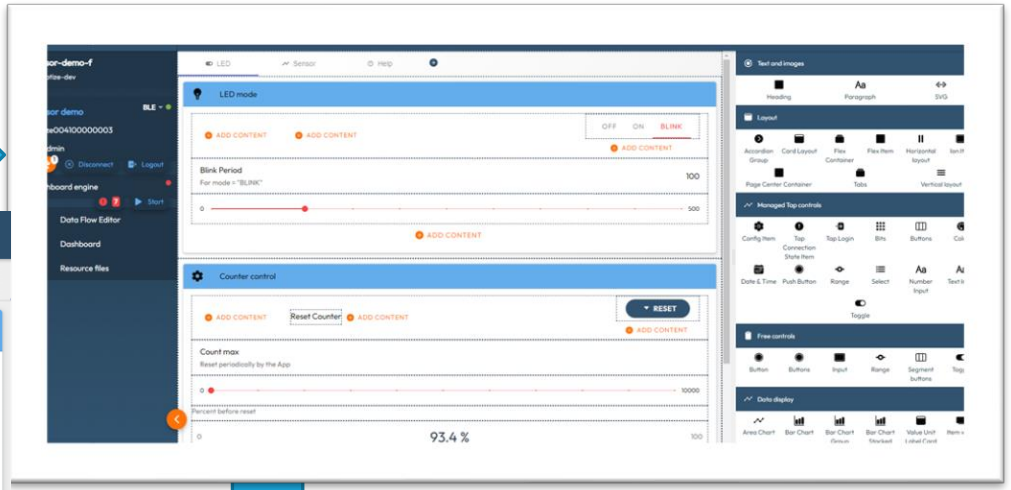
App Editor Suite: Two complementary tools

Flow Editor: How it works





Page Editor: How it looks



Dashboard Editor:
Layout view to organize page contents

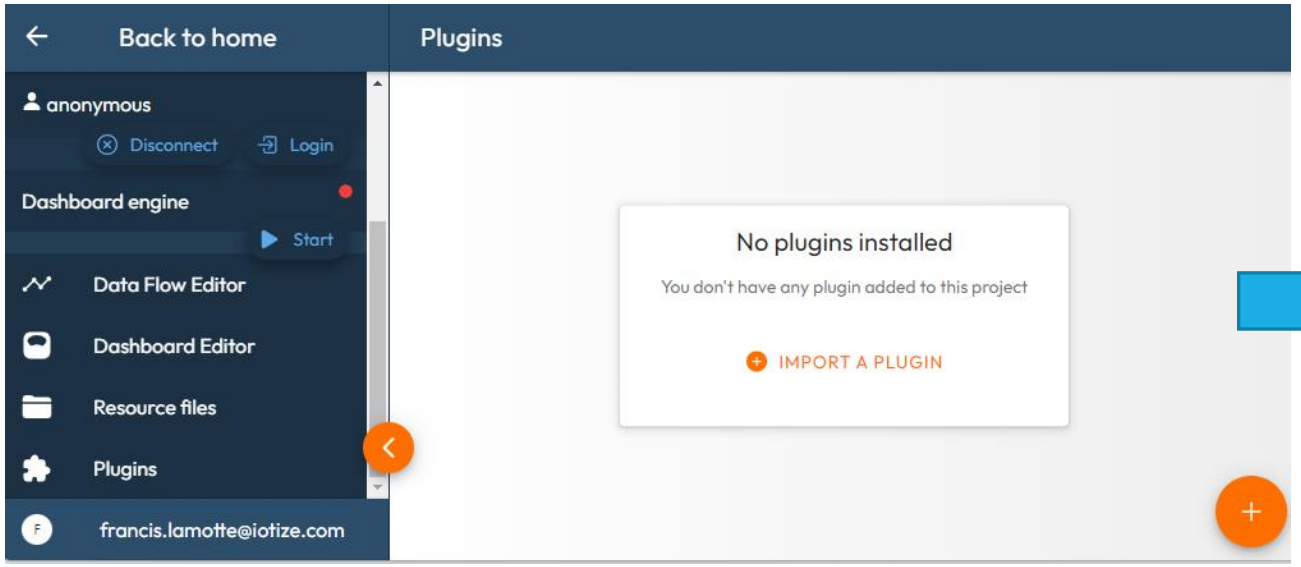
Components

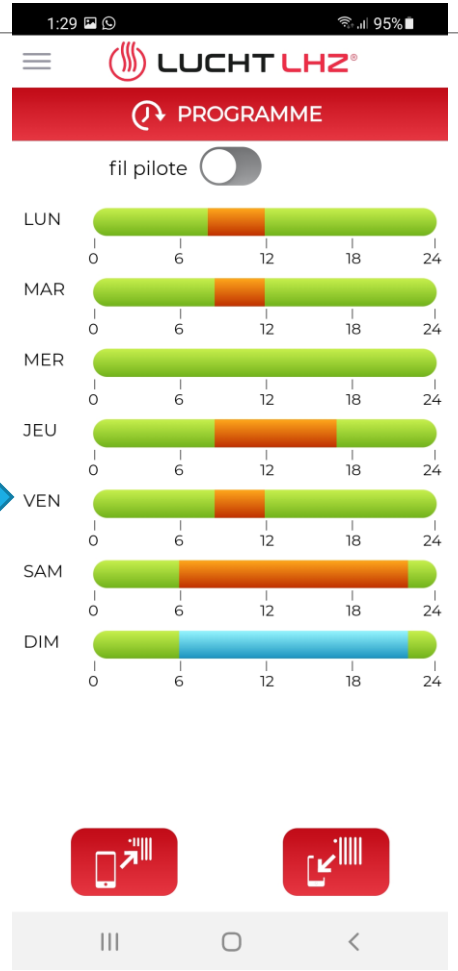
Static HMI Items

Layout & organization

Machine HMI (r/w)

Page Editor:
Add your own advanced plugin!

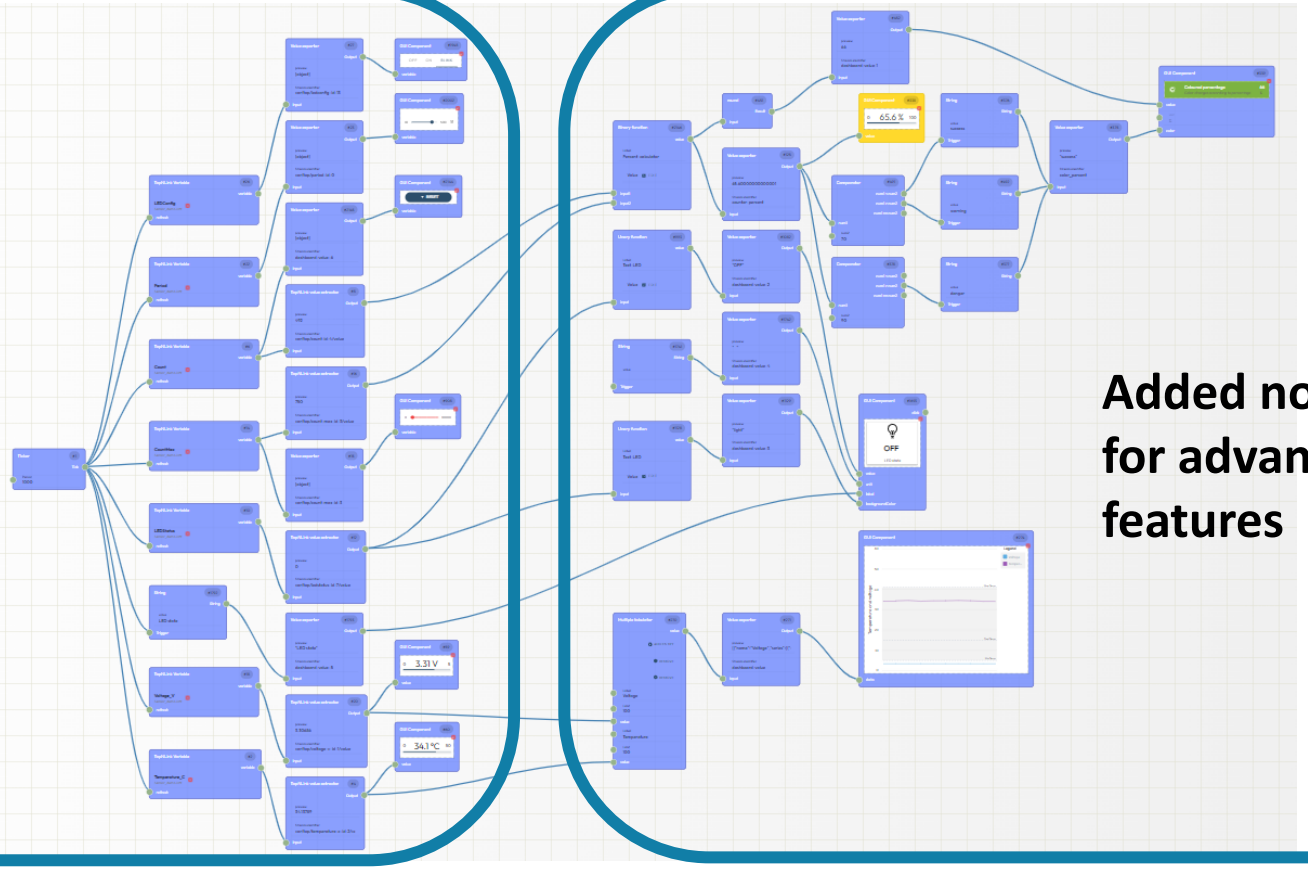




Flow Editor:

An optional tool for advanced features

Nodes automatically generated

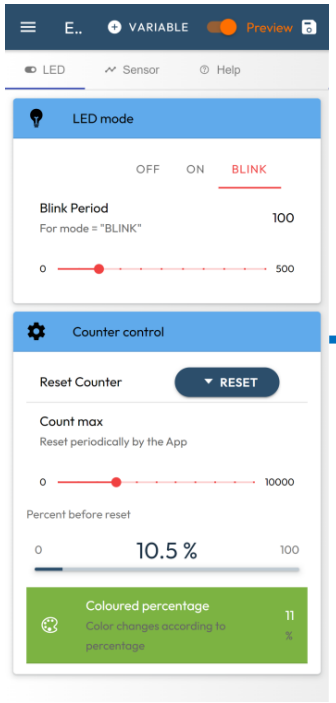


Added nodes for advanced features

3 steps

Step	Context
Preview	• Immediately in the Dashboard Editor • WYSIWIG edition
Dynamic Test	• With a dynamic App (Tap Manager or equivalent) • Multi-device, multi-HMI, …
Static App	• Specific to one (or a few devices) • Customer dedicated App (published or not)

Last Steps:
From the tools to the stores

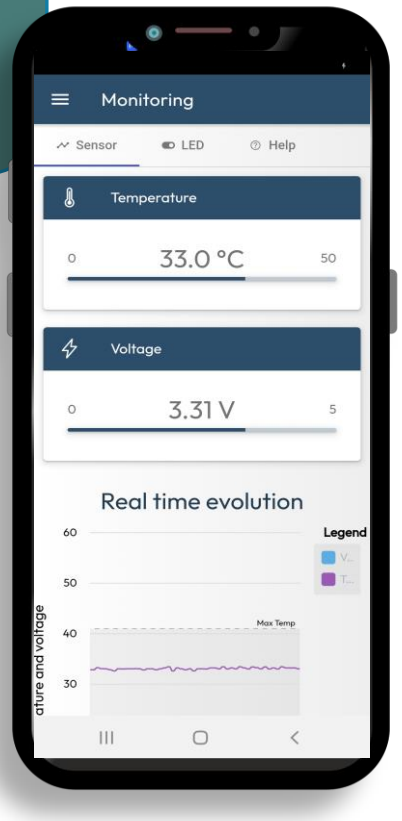


App Generator

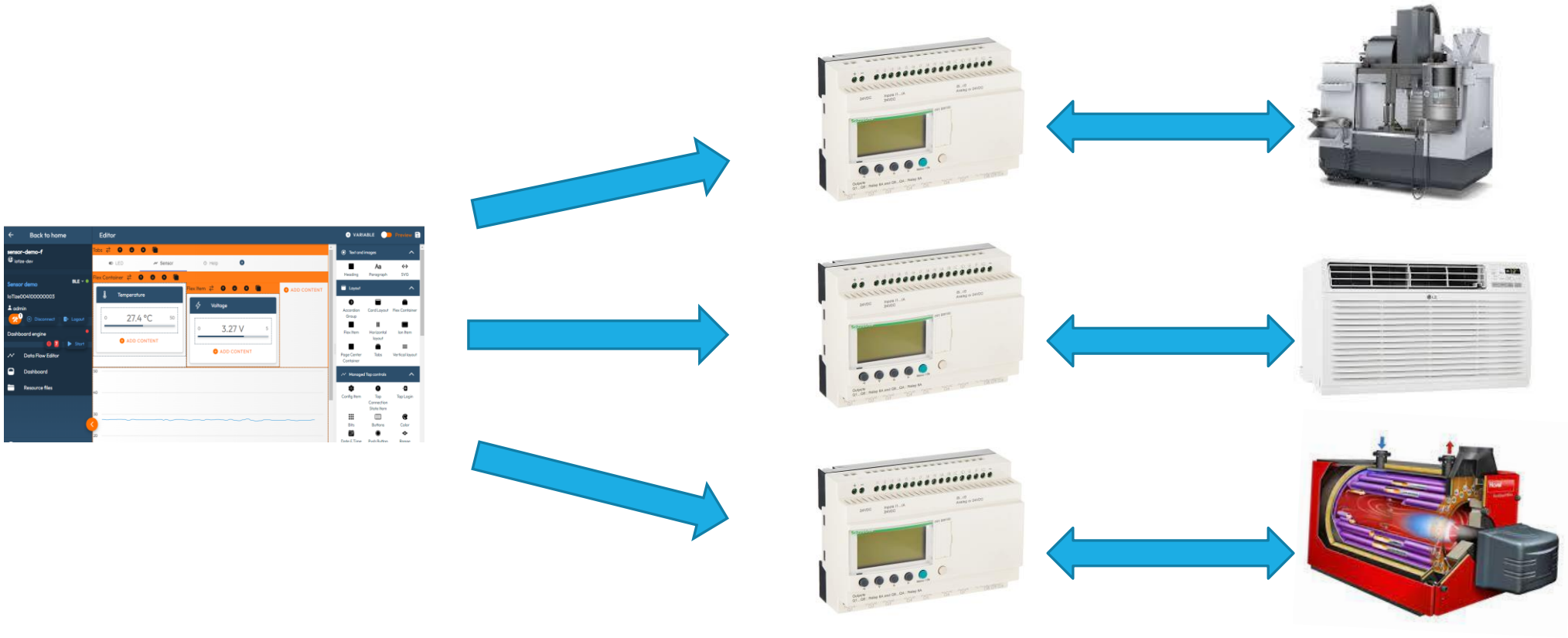
Ionic project

Build, Sign & Publish

Add extra features



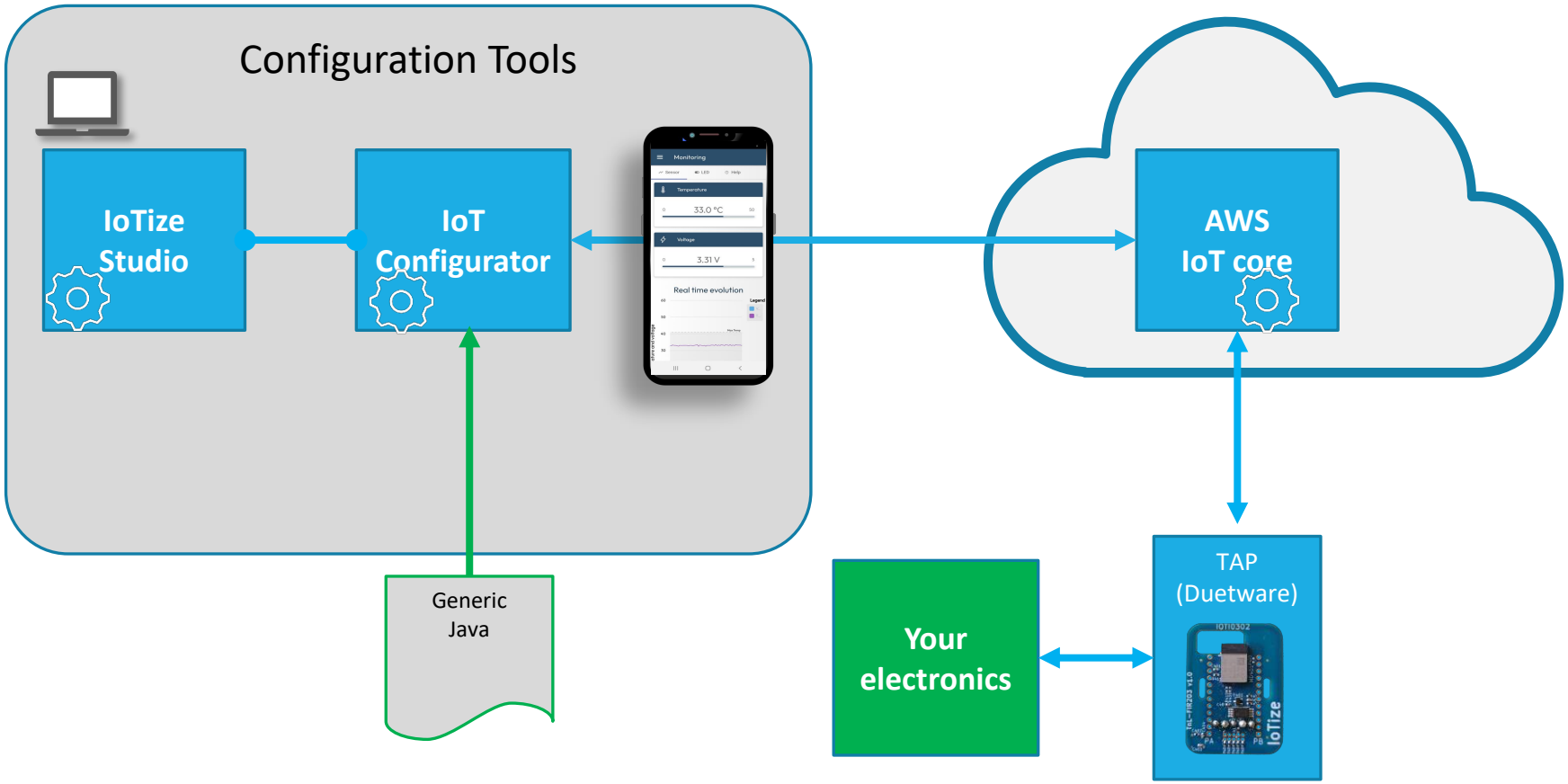
Use cases for the App Editor + static App
Example of PLC integrators



Use cases for a dynamic App + App Editor

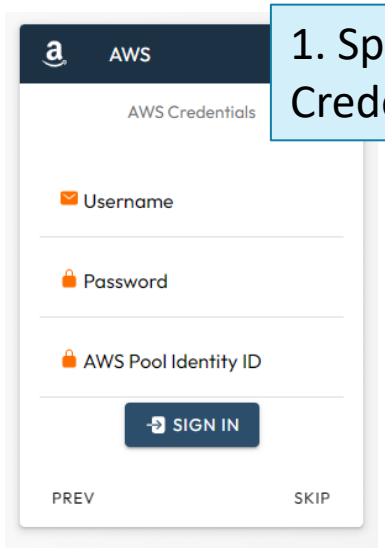
New IoT Platform configurator

“No Code” configurator

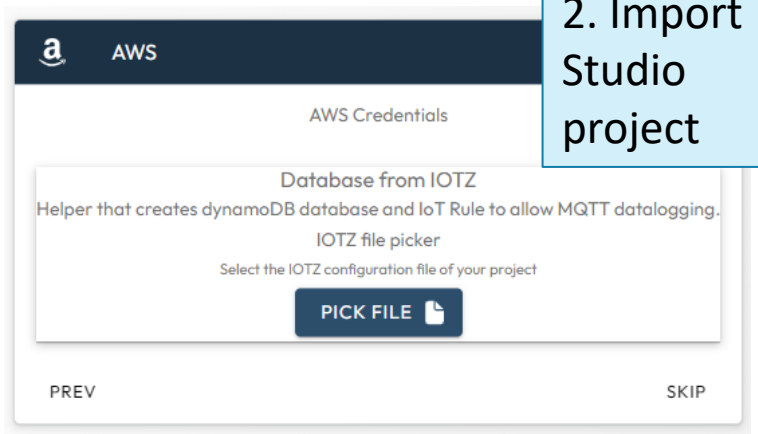


- Device provisioning
- Dataloging
- Alarm
- User management

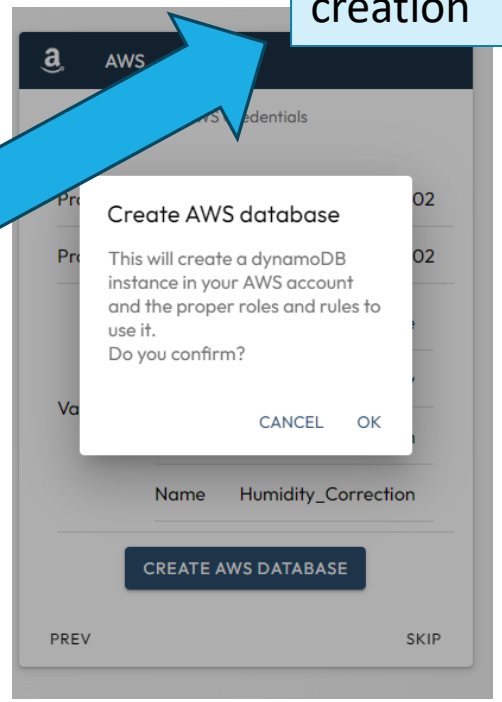
“No Code” IoT AWS Configurator



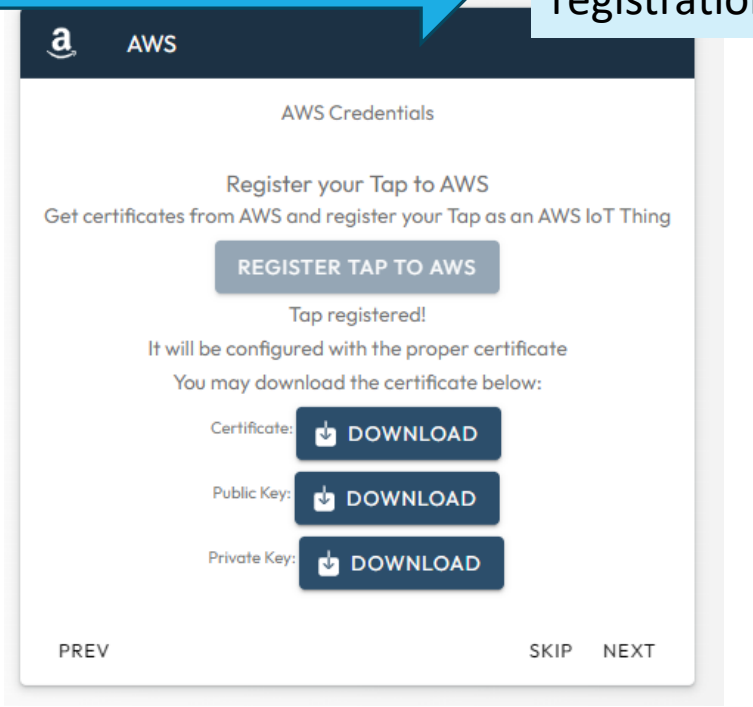
1. Specify AWS Credentials



2. Import Studio project



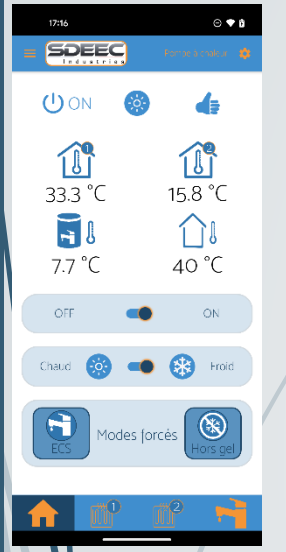
3. Database creation

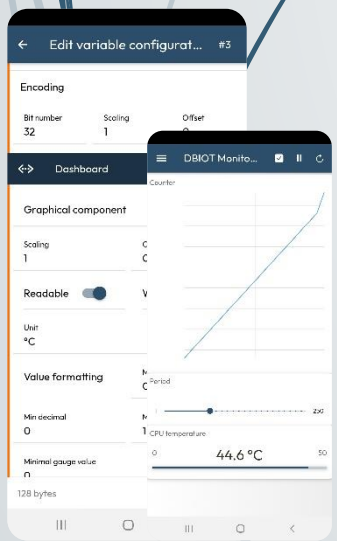


4. Devices registration

Two solutions to connect your electronics to a mobile App and/or the Cloud

Environment Studio and Java tools



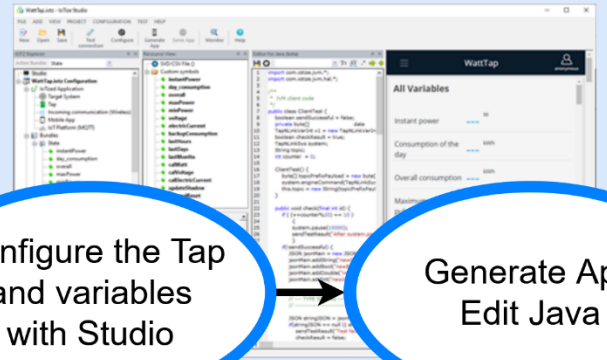


Your Electronics

Tap

Connect the Tap to your electronics

Dedicated App



Configure the Tap and variables with Studio

Generate App Edit Java

Adaptable App

Configure variables with the App

Test and go!

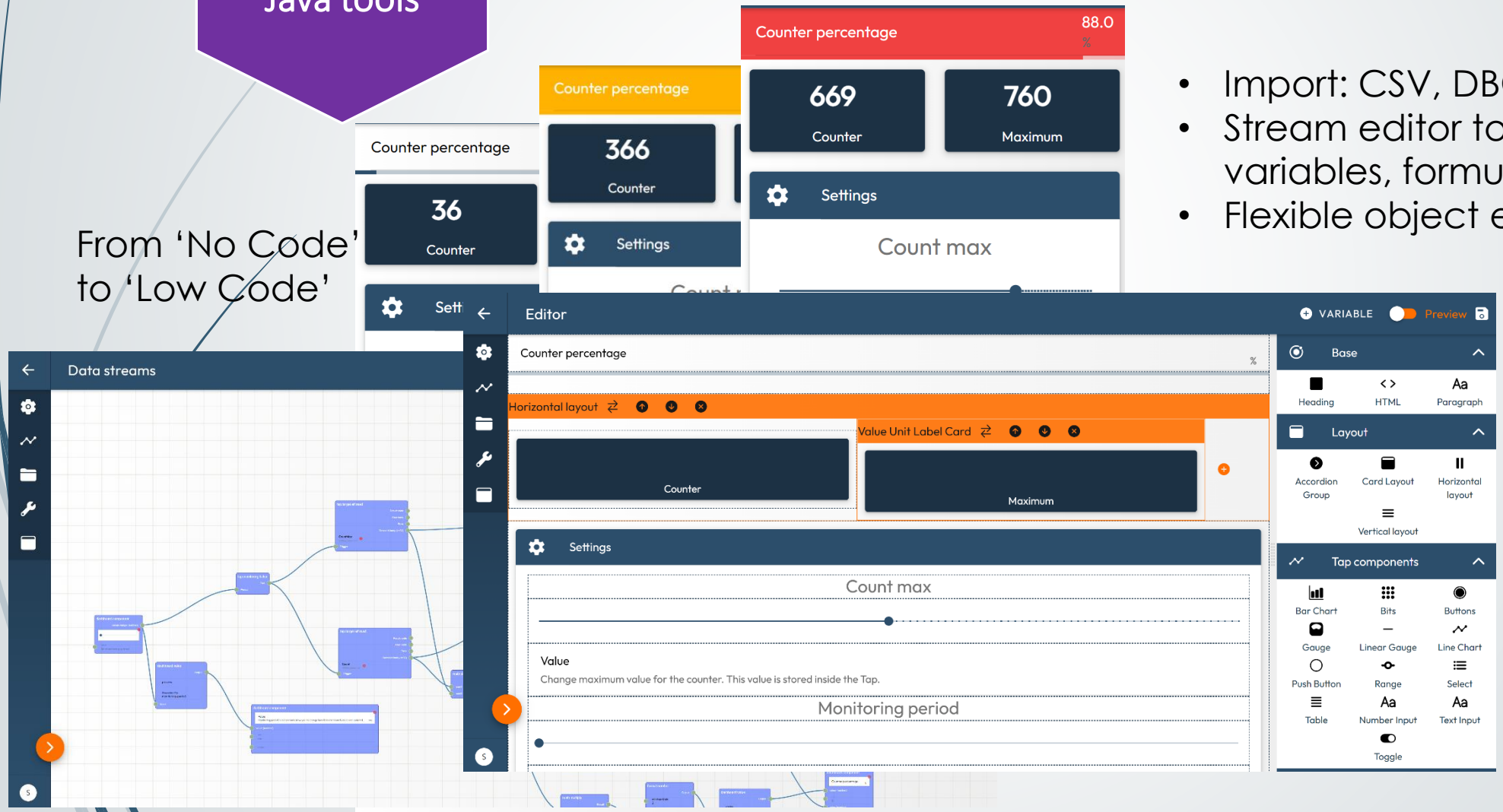
WiFi
LTE-M
LoRa

NFC
BLE
WiFi

Environment Studio and Java tools

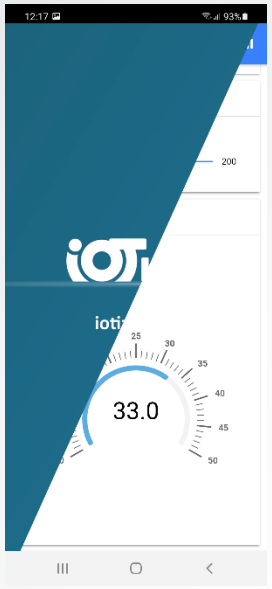
Advanced HMI graphical Editor

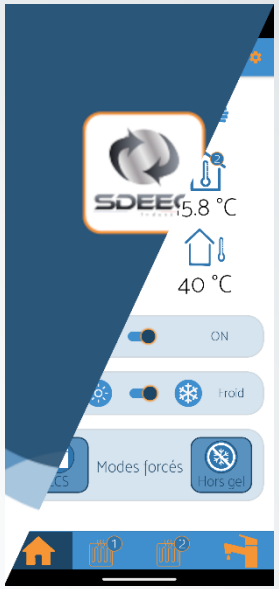
From ‘No Code’ to ‘Low Code’

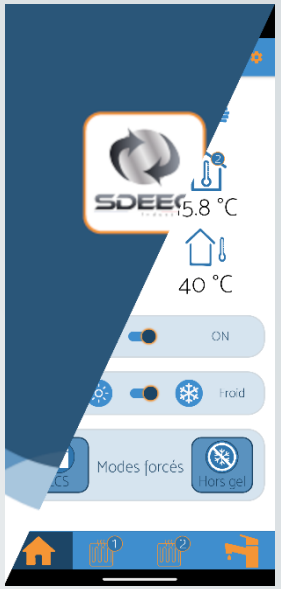


- Import: CSV, DBC, ELF, …
- Stream editor to combine variables, formulas, …
- Flexible object editor

Environment Studio and Java tools







	Adaptable App	Dedicated App		
	TEST/RELEASE	**PoC**	**BETA**	**RELEASE**
App	Configurable	*Generated*	*Customized*	*Published*
Connection(*)	Modbus RTU/TCP	Modbus RTU/TCP	Modbus RTU/TCP	Modbus RTU/TCP
Branding	Iotize / Partner	'MyCompany'	'MyCompany'	'MyCompany'
Graphics	Standard	Standard	Customized	Customized
Operations	Configure with final App	Config on Studio +generate	Adapt generated source files	Test and publish
Development	10 min	30 minutes	2-3 days	2-3 days

(*) wire connectivity could be also based on CAN, USB, RS232,…

www.iotize.com

Environment Studio and Java tools

A comprehensive set of tools to customize the Tap