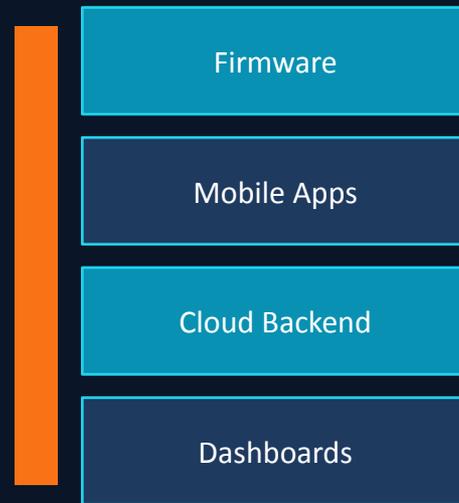


# BConnect

The Lovable for Complex Systems in  
the Physical World

From product intent to **production-ready systems**  
firmware, apps, cloud, and dashboards,  
unified by a **single executable blueprint**.



# Frontier AI Models excel at writing code **Not** at delivering complex systems



## What Models already do very well

- Generate high-quality web and backend code
- Turn UI design into code
- Enable rapid iteration at low cost

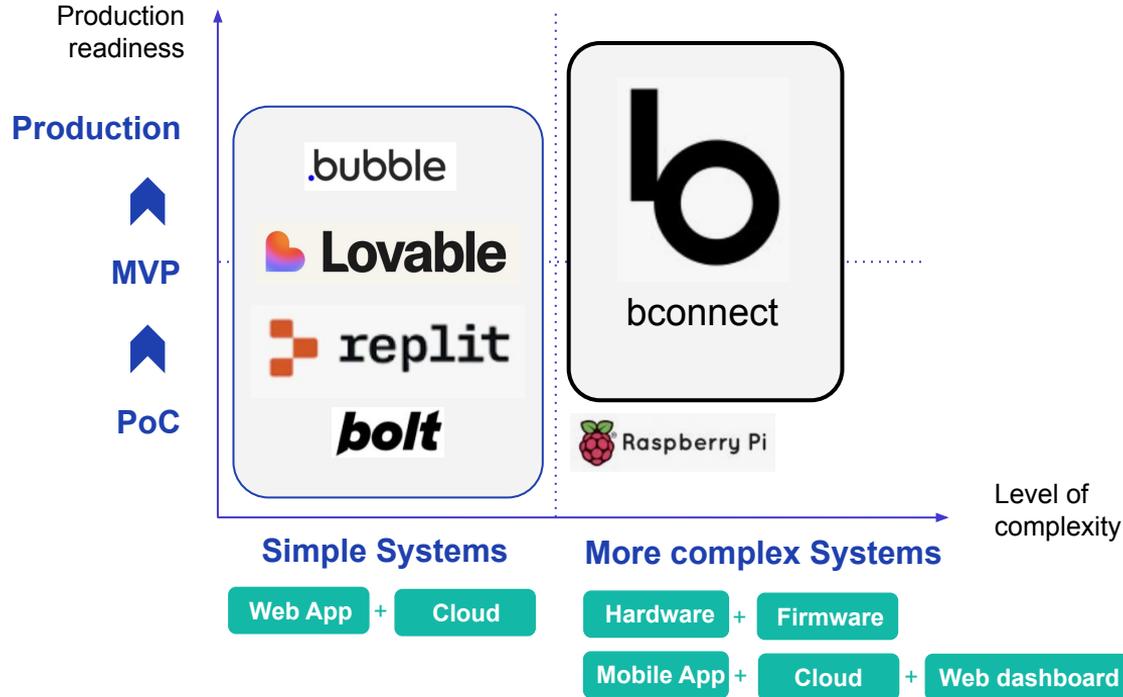


## Where Models alone break down

- Embedded & firmware software
- Multi-systems (*devices + mobile apps + web portals + backend + AI*)
- Multiple user roles, permissions, and workflows
- Hardware constraints (*memory, low power*)
- Electronic schematics & board designs

**AI writes code. Systems need architecture**

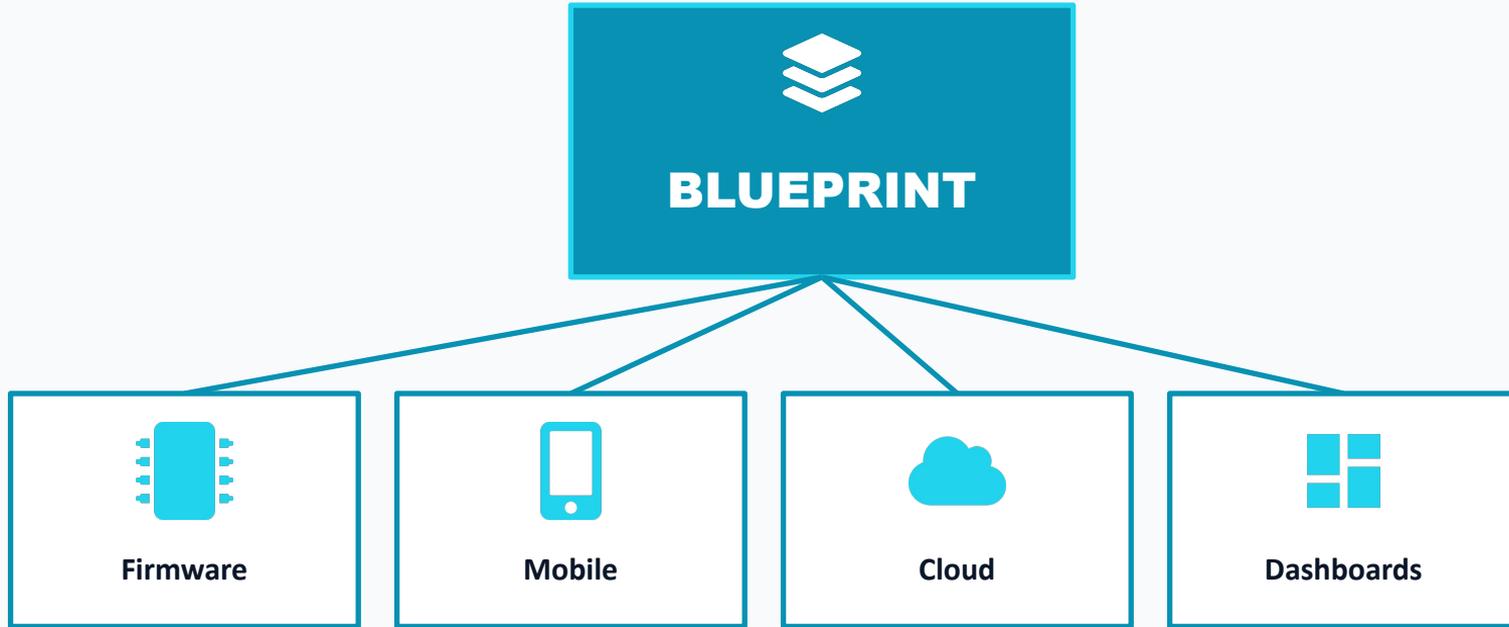
# Built for Complex Systems that must ship



**Key Difference:** BConnect is not a prototyping tool. It generates production-ready architecture and software with real-world constraints baked in.

# System Blueprint: Single Source of Truth

One executable blueprint defines entities, roles, data contracts, device requirements, and workflows. Everything generated stays aligned across layers.



# More than AI coding: we make AI reliable for complex systems

## AI-Only Tools = Drift

Claude/Codex can write code, but:

- Don't maintain cross-layer contracts
- Lack version control discipline
- Can't enforce architectural consistency
- Rapid prototypes that don't compile into real products

## BConnect Rails = Coherence

Deterministic scaffolding:

- Typed SDKs + schemas + migrations
- Versioned contracts between layers
- Compatibility checks by default
- AI operates safely inside the rails

**Deterministic skeleton + AI muscle = reliable complex systems**

# A solution used for millions of devices

Baracoda : 20+ Years of Experience in Smart Connected ad Digital Solutions

Products deployed to millions of users across healthcare, retail, and industrial

## Proven Track Record

- Millions of deployed devices (Colgate, Orange, IBM)
- Variety of use cases in Retail, Healthcare, and Industry

## Market Validation

- Deployed at scale globally
- Regulatory compliance
- Real-world data pipelines

## Technology Foundation

- Secured end-to-end stack
- Mix of deterministic & AI code generation
- Versioning & migration

Baracoda has productized its engine into a Platform

# How it works

Four steps from requirements to production-ready code

1

## Upload Requirements

PRD, schematics, Figma designs

2

## AI Generates Blueprint

Specs, Data models, Roles, Business logic

3

## Configure Hardware

Sensors, chipset, connectivity

4

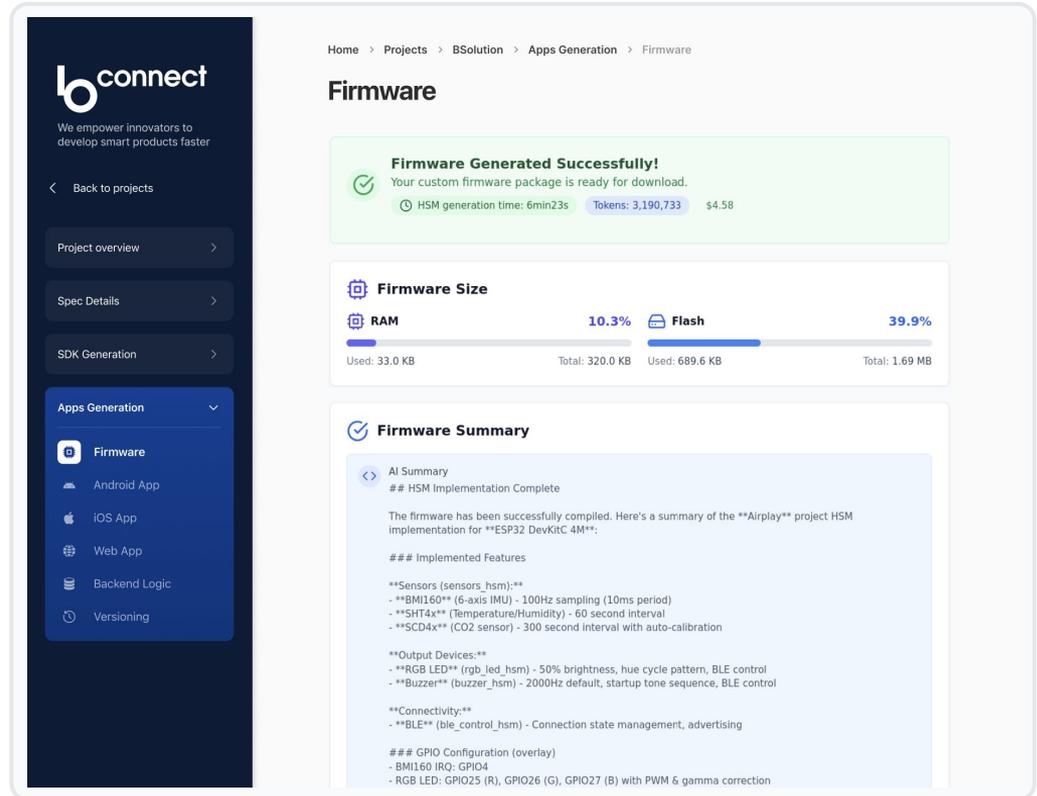
## Generate Everything

Firmware + Mobile + Web + Backend  
+ Documentation, SDKs.

 **BConnect Copilot**

Natural language interface guides you through each step

Pitch video : [here](#)



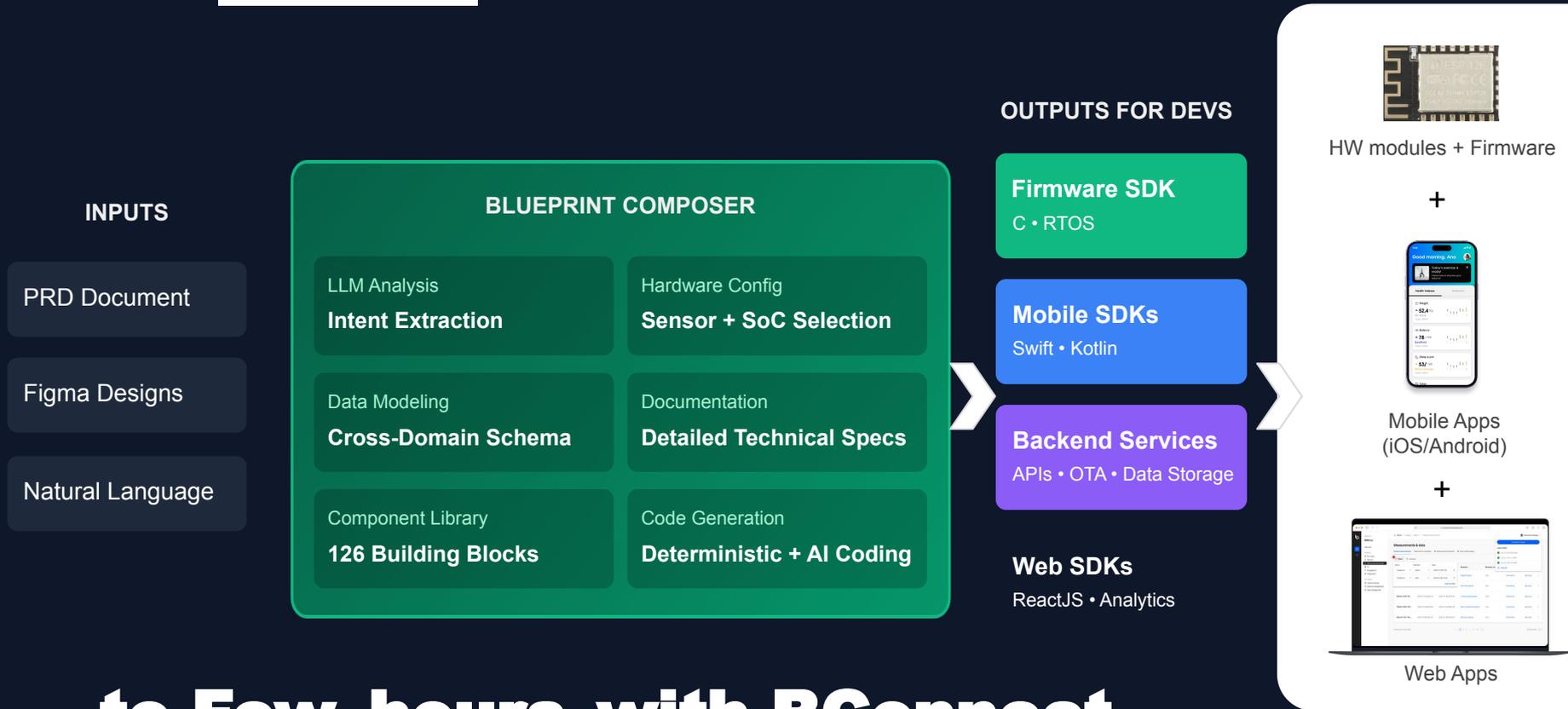
The screenshot displays the BConnect Copilot interface. On the left is a dark navigation sidebar with the logo 'bconnect' and the tagline 'We empower innovators to develop smart products faster'. The sidebar menu includes 'Back to projects', 'Project overview', 'Spec Details', 'SDK Generation', and 'Apps Generation'. Under 'Apps Generation', 'Firmware' is selected, with other options like 'Android App', 'iOS App', 'Web App', 'Backend Logic', and 'Versioning'.

The main content area shows the 'Firmware' generation status. At the top, a green banner reads 'Firmware Generated Successfully!' with a checkmark icon and the message 'Your custom firmware package is ready for download.' Below this, it shows 'HSM generation time: 6min23s', 'Tokens: 3,190,733', and '\$4.58'. A breadcrumb trail at the top reads 'Home > Projects > BSolution > Apps Generation > Firmware'.

Below the success banner is a 'Firmware Size' section with two progress bars. The first bar is for 'RAM', showing 'Used: 33.0 KB' and 'Total: 320.0 KB' with a progress of 10.3%. The second bar is for 'Flash', showing 'Used: 689.6 KB' and 'Total: 1.69 MB' with a progress of 39.9%.

The bottom section is titled 'Firmware Summary' and contains an 'AI Summary' with the following text:  
## HSM Implementation Complete  
The firmware has been successfully compiled. Here's a summary of the \*\*Airplay\*\* project HSM implementation for \*\*ESP32 DevKitC 4M\*\*:  
### Implemented Features  
\*\*Sensors (sensors\_hsm):\*\*  
- \*\*BMI160\*\* (6-axis IMU) - 100Hz sampling (10ms period)  
- \*\*SHT4x\*\* (Temperature/Humidity) - 60 second interval  
- \*\*SCD4x\*\* (CO2 sensor) - 300 second interval with auto-calibration  
\*\*Output Devices:\*\*  
- \*\*RGB LED\*\* (rgb\_led\_hsm) - 50% brightness, hue cycle pattern, BLE control  
- \*\*Buzzer\*\* (buzzer\_hsm) - 2000Hz default, startup tone sequence, BLE control  
\*\*Connectivity:\*\*  
- \*\*BLE\*\* (ble\_control\_hsm) - Connection state management, advertising  
### GPIO Configuration (overlay)  
- BMI160 IRQ: GPIO4  
- RGB LED: GPIO25 (R), GPIO26 (G), GPIO27 (B) with PWM & gamma correction

# From months with 3-10 FTE...



# ...to Few hours with BConnect

# Not a prototype. A product.



## Unified Product Definition

One definition across device, app, cloud. No interpretation drift.



## System Evolution

Changes classified by risk. Compatibility enforced. Parallel versions supported.



## System Contracts

Explicit contracts across layers. Clear inputs, outputs, responsibilities.



## Observability

Unified telemetry & logs. Device health monitoring. Early failure signals. Security.



## Testing & Validation

Rules checked before deploy. Contract consistency enforced.



## Extensible Integration

Clean extension points. APIs and webhooks ready. Partner-safe integrations.

**Systems remain operable as fleets scale to millions of devices**

# Selected Target Industries



## Industry 4.0

Sensors & trackers for environmental monitoring, machine performance, and industrial IoT



## Consumer Electronics & Wearables

Connected devices with embedded intelligence, mobile apps, and cloud ecosystems



## Medical Devices

Governed systems with compliance, traceability, and regulatory requirements

*Proven across millions of deployed devices in retail, healthcare, and industrial IoT*



# Industry 4.0

Small-scale, real deployments. Go from pilot to low-volume production without rebuilding the stack.

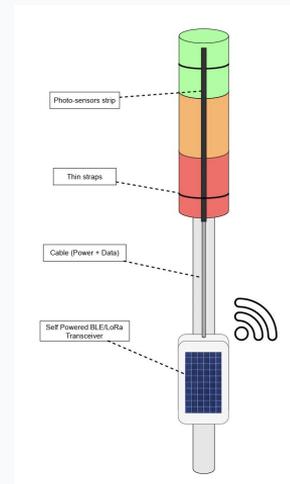
## Environmental Monitoring



KaerSense sensors measure temp, humidity, CO<sub>2</sub>, pressure, noise, motion — real-time to Cloud via LoRaWAN.



## SYNTEGON



## Machine Performance Tacking



Non-invasive self-powered trackers to monitor machines availabilities, throughputs, energy consumption.

Low-volume, high-value use cases  
No custom stack per project

Same architecture from pilot to fleet  
Designed for constrained environments



# Consumer Electronics & Wearables

Devices may be built in Asia — control of data, intelligence, and customers should not be.



## Risks from lack of control

- Data & intelligence captured by platforms (e.g., iRobot)
- Compliance and cybersecurity exposure
- Product and UX commoditization
- Business model lock-in



## New Opportunities

- Faster time-to-market, without lock-in
- Multi-product, multi-brand ecosystems
- Recurring, high-margin services  
(maintenance, warranty, insurance, refill, resale)



**Control the Software, Algorithms, Data and Touchpoints — Control the value**

**References:** fortune 500 companies and unicorns, details under NDA

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# Medical Devices & Software

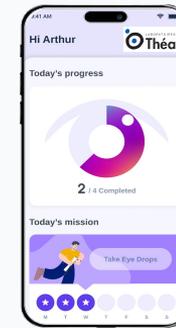
Regulated products require traceability, governance, access control, auditability, and controlled evolution.

## Regulated Requirements

-  Traceability & audit trails
-  Role-based access control
-  Full auditability
-  Controlled evolution & versioning
-  Compliance documentation

## BConnect Rails

-  Blueprint governance & versioning
-  Built-in security & compliance
-  HDS + GDPR support
-  Safe product evolution
-  Reduced rework & risk



Deployed: Veterinary AI assistants, NextMotion aesthetics platform, digital health solutions

# Our partners



## Optimisation and Edge AI

With MountainEdge, we enhance AI deployment strategies across edge and cloud environments.

Together, we ensure efficient, scalable and production-ready AI integration within BConnect-generated systems.



## AI-Driver Electronics Acceleration

With DeepPCB, we streamline the transition from system architecture to optimized electronic design workflows.

Video : [DeepPCB X BConnect](#)



## Industrialization & Manufacturing Execution

Kaertech enables rapid prototyping and scalable manufacturing for BConnect-powered devices.

Together, we bridge system generation with real-world production, from first units to industrial deployment.

*From architecture to production: without fragmentation, without dependency.*

# At the forefront of innovation.



- New York
- Paris
- Hong Kong
- Laguna / Manila
- Shanghai
- Warsaw



Get in touch with our Sales Manager  
[samuel.calef@baracoda.com](mailto:samuel.calef@baracoda.com)