Concepts

- Smart Solar Irrigation System

While the market is already oversaturated with cheap, unreliable IoT irrigation products and AI irrigation fluff, our goal is to deliver not just some cheap hardware, but a well developed, robust and reliable and maintainable solution.

Our System needs to be able to deal well with:

- bad power
- no internet
- heat & dust
- unqualified field workers

So this means, our Architecture needs to be:

- offline-first
- hardware-enforced safety
- deterministic control
- supervisory only networking
- explicit decision precedence
- audit-ready by design

And our Architecture also needs to be able to:

- work after 3 years (most cheap smart farming stuff does not)
- survive a dead battery
- survive a broken gateway
- survive an technician swapping wires
- survive being offline for months

Business Model

We do NOT want to build this as a product

What we do NOT want to do is to build this as a "product":

- hardware margins are very low
- support is much effort
- install quality dominates outcomes
- we well get undercut by junk vendors immediately
- farmers don't pay for architecture elegance

If we try to sell devices, we lose.

What we should try to aim for

Reference Architecture

We can publish this as:

- a donor-compliant reference design
- a minimum safety & control standard
- an open or semi-open architecture

Then:

- integrators build on it
- governments reference it
- bad products get filtered out

This would make us the *author*, not the *vendor*.

Compliance Layer

We do not focus on building hardware (except some reference implementations), but we focus on building:

- control rules
- safety invariants
- validation tests
- audit schemas

Vendors must prove: "*Our system conforms to this architecture*".

This is how we avoid the race to the bottom of "we can build this box even cheaper than the others!".

What we sell is:

- design review
- system validation
- commissioning rules
- Monitoring & Evaluation compatibility

From:
http://wiki.irrigation.afriticgroup.com/ - **Afritic Open Farming Standard**

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Last update: **2026/01/21 18:35**