Concepts

- Smart Solar Irrigation System
- chatgpt_dump

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

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