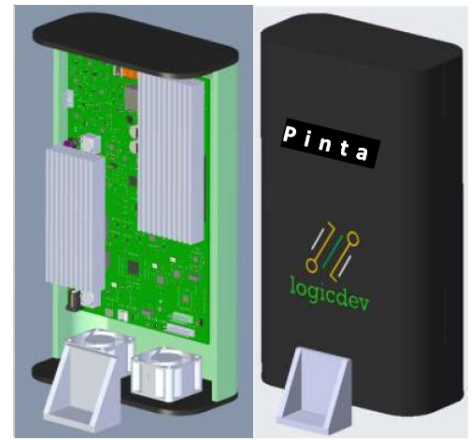




## Pinta AI based equipment (Patented)

- 70% power saving
- High speed switching(<1us)
- uA-microampere control in discharging
- remote working
- low Cost
- Improving AI based test coverage
- Real time -Digital twin
- **FPGA based -Hardware in Loop (HIL)**



Reached TRL5

**Skills to offer:**  
Digitised, Digitalised, Hardware in loop, Digital Twin, FPGA, Analog to digital converter, Digital High speed driver+controller, PCB, and testing.



Industrial AI based Controller (joint development)

### Challenge

A rapidly evolving grid is making it more difficult for smart inverter manufacturers to complete projects on time. This rising complexity makes projects delays an ongoing challenge for embedded industries. The demand for greater system functionality increases with high-power systems becoming more common. Engineering teams need design and test automation tools to improve schedule performance, functionality and quality.

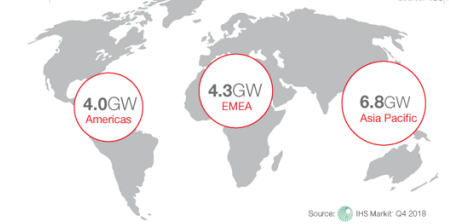
**Projects Behind Schedule**  
for embedded development projects per year.



Source: VDC Research 2019

- Top 5 Factors** causing delays in current projects not using HIL.
1. Technical Obstacles
  2. Changes in Specifications
  3. Complexity of Application
  4. Lack of Manpower
  5. Emergence of Higher Priority Projects

Source: VDC Research 2019



Source: IHS Market Q4 2018

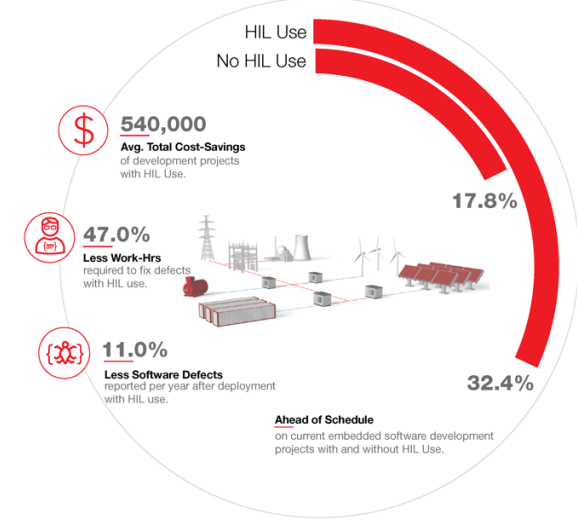
### Utility-Scale Battery Storage Pipeline

The global grid-connected battery storage pipeline will total 15GW in 2018. With 100MW systems occurring more frequently.



### Solution

A closed-loop model-based testing solution can improve project schedule performance, decrease development costs, software defects and work-hours required to fix defects. Hardware-in-the-Loop technology allows a direct interface between the system under test and a real-time simulation of the power hardware. It increases engineering efficiency by enabling parallel development of software and hardware. HIL technology proves an efficient and accurate system development which is essential for meeting schedule and budget goals.



<https://www.typhoon-hil.com/solution/section-01-introduction-to-hil/>

