

CATALYST

Hardware systems + integrations



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Agenda

- Capturing your data
- SmartAnalytics APIs
- SmartAnalytics SFTP
- Stages of an EM project
- Stakeholders in EM projects
- Hardware partners
- Other hardware integrations

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Different Approaches



New meters

Integrations with existing local systems or using a gateway

- SCADA, BMS/BAS
- SmartAnalytics SFTP and API

Integrations with other interval data providers

Hybrid approach



Integrations with utility companies

Manual readings

Utility bills

- Printed or in digital format

EnergyCAP SmartAnalytics APIs

<https://developers.wattics.com>

web-collector.wattics.com

Data Push API

- Data upload
- Override
- Reprocess
- Last Data Received
- Partial Data

api.wattics.com

Dashboard Management API

- Users
- Organizations and Sites
- Meters and Appliances
- Consumptions and Costs
- Raw Data
- Tariffs

EnergyCAP SmartAnalytics Data Push API

Data Upload Call

- HTTP(S) POST Request
- Basic Authentication
- JSON packet or list
- In chronological order
- Timestamp: local time or UTC
- One or multiple electrical parameters

```
{  
  "id": "myUniqueMeterID",  
  "tsISO8601": "2024-02-28T11:15:00.000+00:00",  
  "pC_1" or "value": reading  
}
```

EnergyCAP SmartAnalytics SFTP

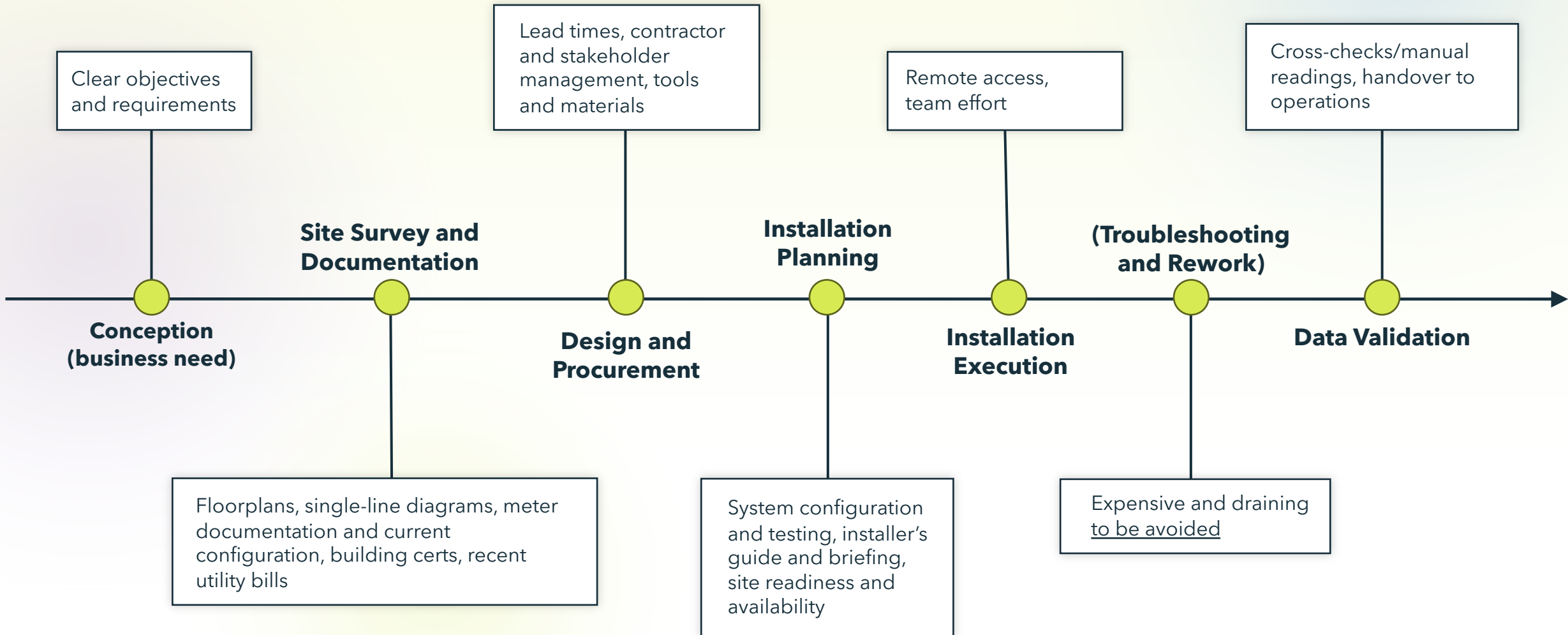
Flat files (CSV)

- Simple interface (parser)
- Upload via FTP/SFTP
- Queue system
- In chronological order
- One or multiple data points per file
- One or multiple readings per file
- One or multiple electrical parameters

myfile.csv

```
myUniqueMeterID,28/02/24 11:15:00,reading1  
myUniqueMeterID,28/02/24 11:30:00,reading2  
myUniqueMeterID,28/02/24 11:45:00,reading3  
myUniqueMeterID,28/02/24 12:00:00,reading4
```

Stages of an Energy Management Project



Stakeholders in Energy Monitoring Projects

Onboard (usually):

- Owner/Operator
- Energy manager/Users
- Hardware suppliers
- Installers
- EnergyCAP

Need buy in from:

- IT departments
 - Cybersecurity
 - Privacy
- Utility Companies
- Tenants

Factor in:

- Facility-specific procedures and rules
- Local codes and regulations

Good and timely communication is key.
Engagement, commitment, clarity.

Hardware Partners: EpiSensor

- Wireless system (Zigbee based)
- On board cellular modem
- Power metering
- Digital signals (pulses)
- M-Bus and Modbus
- Temperature and humidity
- IP67 enclosures
- Battery and mains powered
- Range extenders
- Integrated via HTTPS POSTs (JSON)



Hardware Partners: Accuenergy

Power Meters

- AcuRev 2110
- Acuvim (II and L series)

Gateways

- AcuLink 810
- Panel Shop
- CT and RCTs
- Integrated via HTTPS POSTs (CSV)

ACCUEVERGY



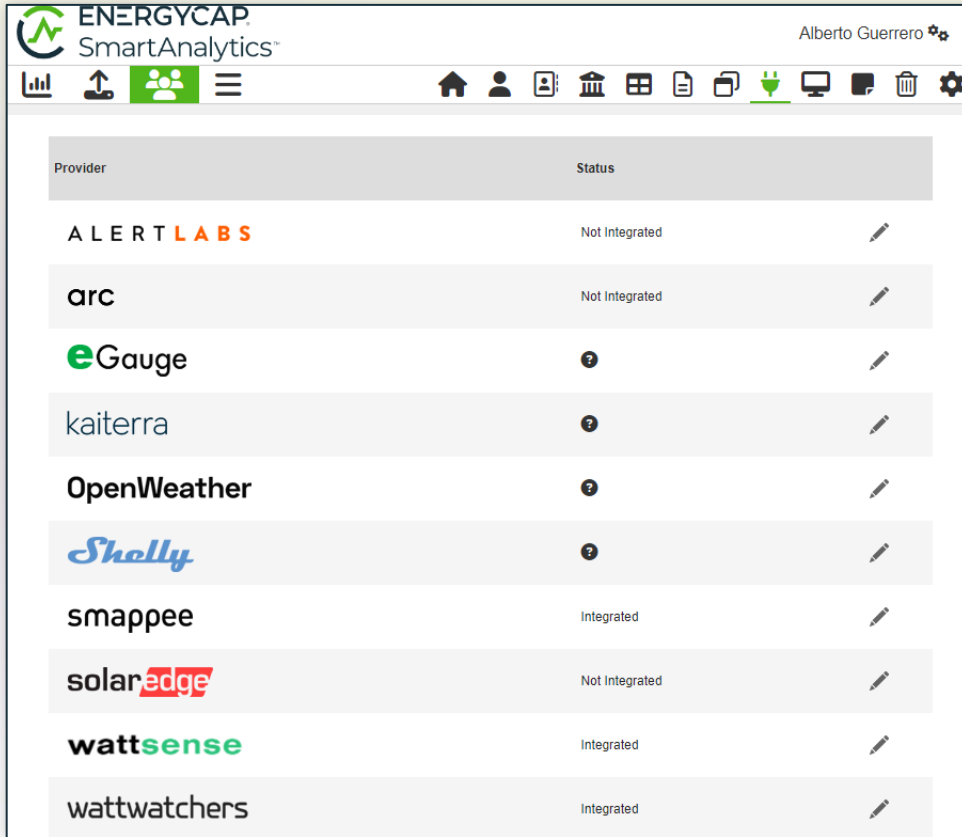
Hardware Partners: Wattwatchers

Auditor Smart Meters

- Cellular or Wi-Fi
- 6 current inputs
- Split-core and Rogowski CTs
- DIN rail ready
- Configured using WW Onboarding Tool
- Fleet Management
- Integrated via Wattwatchers API



Other Hardware Integrations



The screenshot shows the ENERGYCAP SmartAnalytics interface. At the top, there's a header with the logo and the name 'Alberto Guerrero'. Below the header is a navigation bar with various icons. The main content area displays a table of hardware integrations.

Provider	Status	
ALERT LABS	Not Integrated	
arc	Not Integrated	
eGauge		
kaiterra		
OpenWeather		
Shelly		
smappee	Integrated	
solar edge	Not Integrated	
wattsense	Integrated	
wattwatchers	Integrated	



- Multi-commodity solution
- Integrated via Smappee cloud



- Gateway for BMS/BAS
- Integrated via Wattsense cloud



- Mainly power metering
- Integrated via HTTP POSTs (XML)



- Indoor Air Quality Monitoring
- Integrated via Kaiterra cloud

**Installing new equipment
is not the only option**

CATALYST

Thank You!
Any questions?