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Superhands Solar Pitch Deck

11.01.2020

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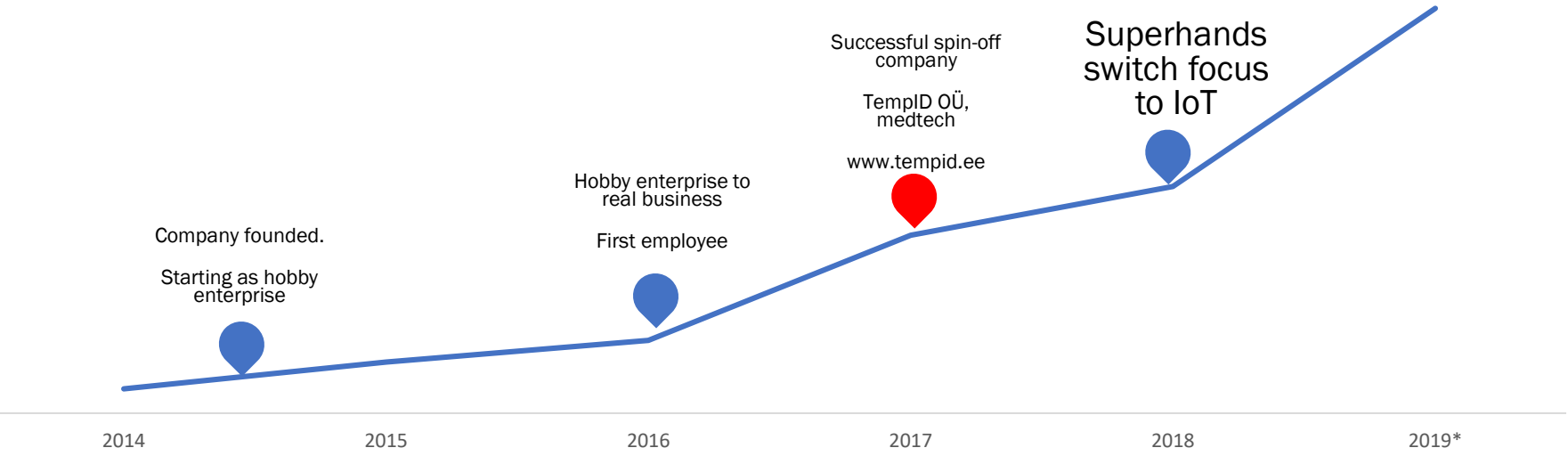
Using innovative ICT to increase feasibility of solar power plants



Superhands OÜ (Ltd.) is founded in 2014. with purpose to deliver innovative solutions to different industries (medicine, manufacturing, entertainment, agriculture, military, logistics etc). Initally we were providing development service to different fields, but during recent years, our focus has been IoT – product development with new-product-introduction service, installations, connections, analytics and project management.

Superhands OÜ also has a successful medtech start-up spin-off company called TempID (www.tempid.ee).

Team

Founders:

Alvar Pällo
Hardware, production

Mihkel Tedremaa
Management, sales

Alari Õis
Software

Additional team members:

2x Software development
1x Technician

Contact:

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Previous achievement of our team - Winners of Ajujaht 2017 with TempID

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Problems:

- Long Return-on-Investment (ROI) time
- Full visualization missing – existing solutions are vendor specific
- Complicated integrations - smart grid, national and regional data hubs
- Expensive construction of solar power plant
- Limited locations - due to the need of conventional data and power links

Solution:

We offer solution (all hardware, connectivity and visualization) to fully visualize performance of solar power plants in order to improve efficiency -> reduce time for ROI.

This enables plant owners, technology providers, financial people, plant construction companies to have full visibility of the performance and status.

Additionally our solutions enables easy integrations to necessary National Data Hubs and energy grid companies who monitor national or regional energy production and do payments to producers.

Superhands advantages

1

Cost reduction

Reduction of IT systems, data and visualization costs of about 50% per site. Reduction of running maintenance (less technician visits) costs by 20%

2

Simplified hardware setup

Reduction of needed hardware per site.

3

New site opportunities

New capabilities to build sites to remote locations (20% of the areas that do not have regular mobile network coverage, but have Narrowband-IoT)

4

Simplified integrations

Rapid integration time, new possibilities for analytics, reporting, payment and monitooing systems

Why Solar Power Visualization?

Global trends

- Driving towards sustainable future
  - Solar energy production increase - In 2017 renewable energy represented 17.5 % of energy consumed in the EU, on a path to the 2020 target of 20 %.
  - EU installed around 8.0 GW of solar power systems in 2018; that is a 36% year-on-year increase over the 5.9 GW connected to the grid in EU-28 in 2017,
  - Carbon-neutral vision – target 2050
  - Smart Grid solutions needed to compliment whole power ecosystem
- New technologies:
  - Communication
  - Device management
  - Smart Grid
  - Energy efficiency and storage

Superhands experience

- Past experience with IoT
- Focus on low power reliable solutions
  - Embedded systems
  - Mobile applications
  - Server solutions
- Vast network of industries
- Location in Estonia
  - Quick feedback from real use cases
  - Rapid production options

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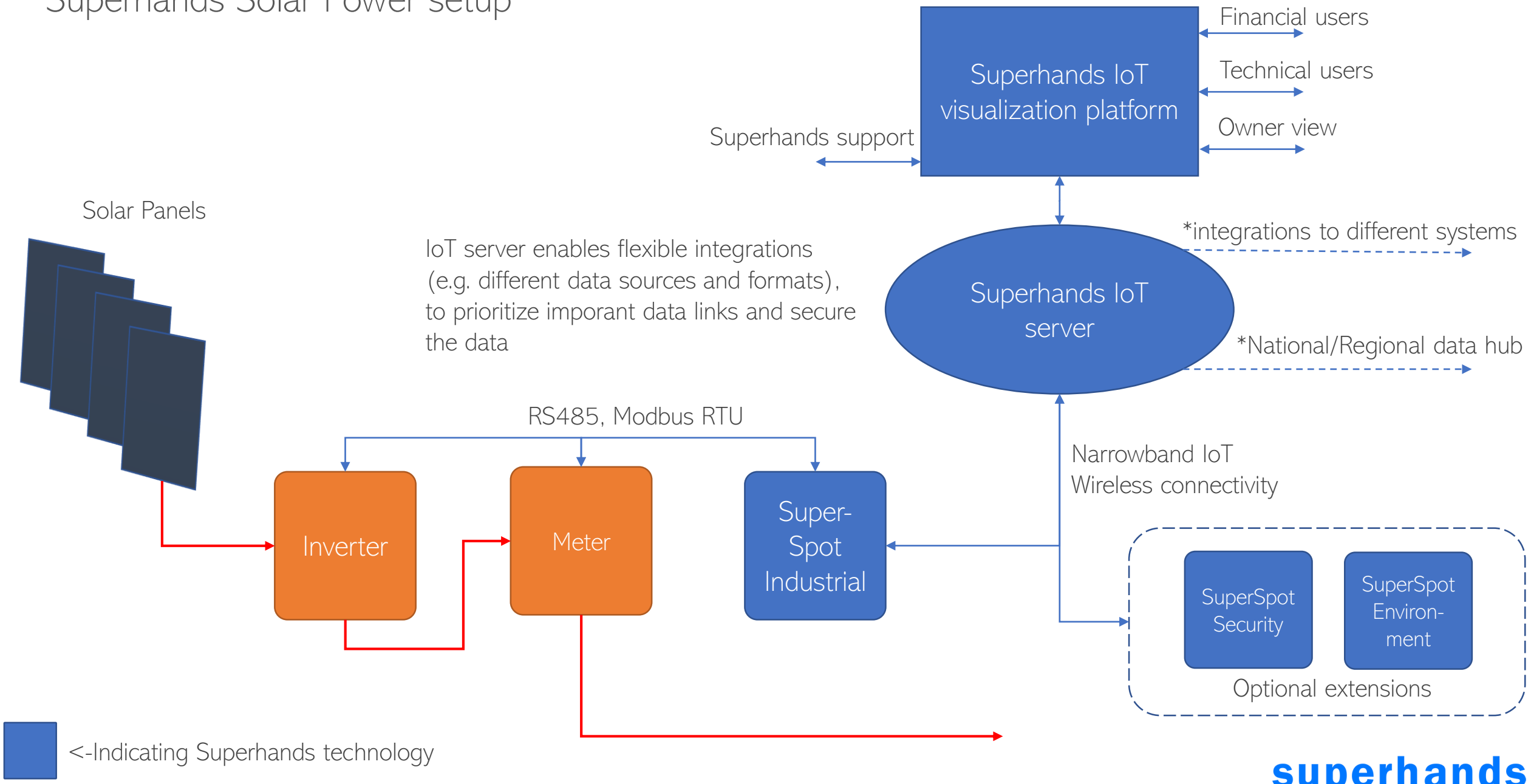
Superhands Solar Power setup



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SuperSpot Industrial Connectivity Unit – a hardware developed by Superhands to deliver data from Solar Power Plants and other energy use-cases

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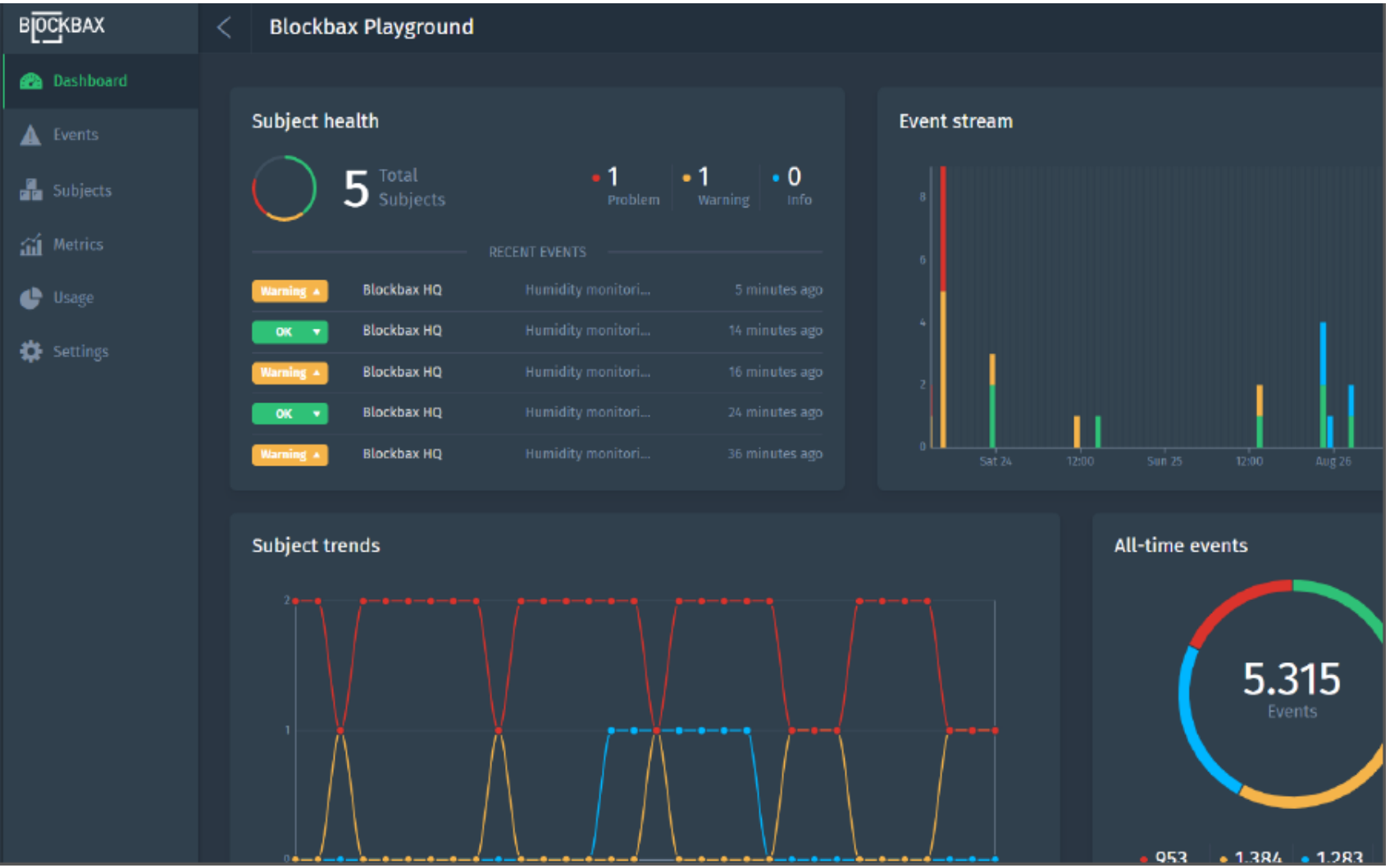
Superhands – IoT Platvorm



Superhands IoT platform:

- Picture showing example of current setup (based on Blockbax technologies)
- Flexible project, site and user management
- Meter and inverter data all together
- Built-in analytics capabilities

- Will be switched to fully Superhands developed solution during 2020

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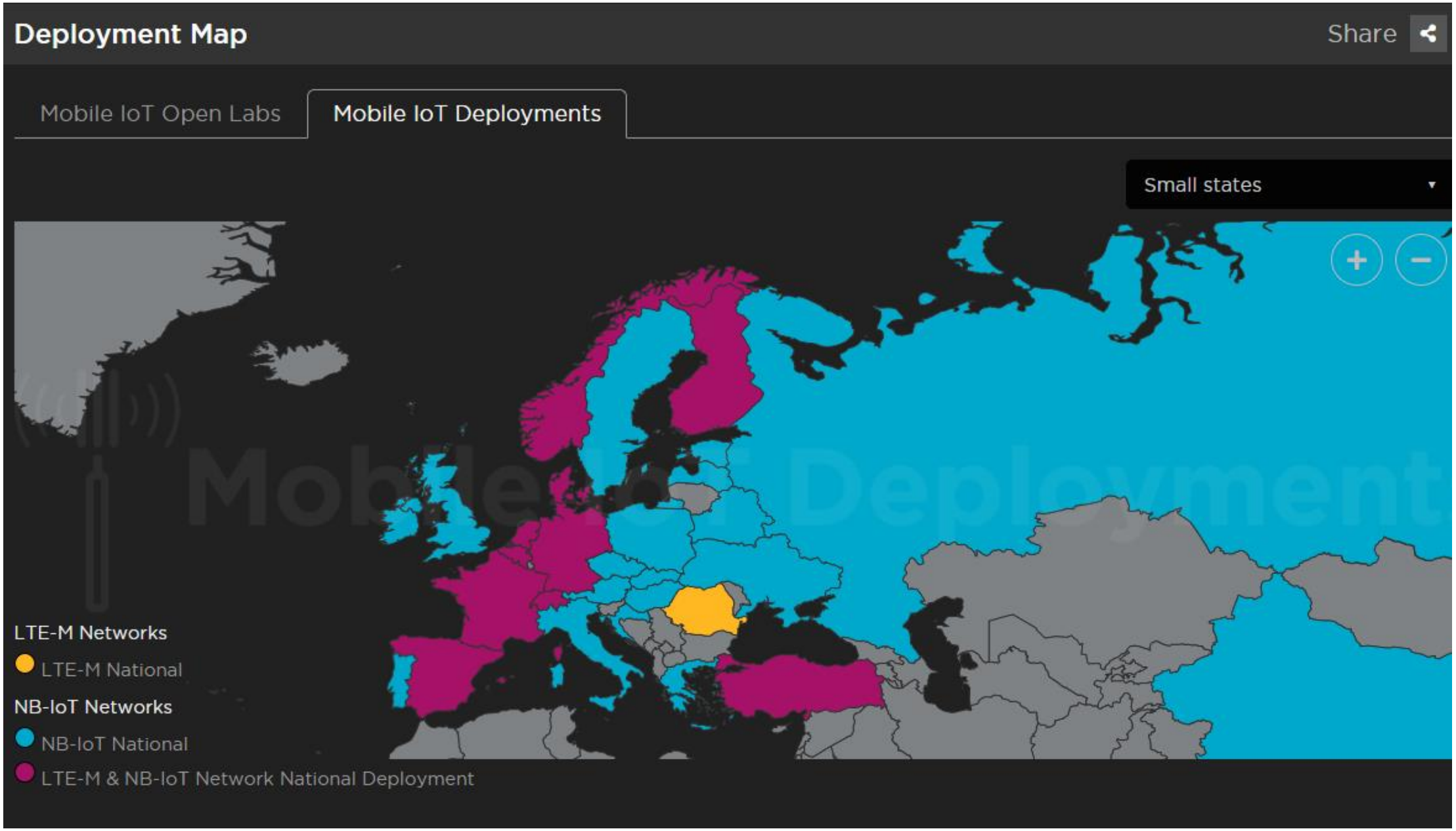
Ongoing pilot example

Eesti Gaas solar power plant:

- Different vendors used (ABB and Iskraemeco) for inverter and meter
- Single device delivering all needed data
- Superhands visualization used
- Integrations to ABB data system and National (Energy) Data Hub

SuperSpot Industrial at the Inverter box

Availability of our selected connectivity option in Europe (blue and purple means „available“)



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Traction:

- Taken 2019 as learning year for IoT
- Going to market through partners at different business verticals (Industry experts)
- Hand out free devices in order to:
  - Get area expertise
  - Get feedback
  - Use partners for promotion
- Media coverage (Estonian)
- First paying customers for our IoT: e.g. RMK, CrabSec, eAgronom etc

- Shifting focus to Solar Power Plant Visualization!

Superhands visited TechBBQ in Denmark together with our partner eAgronom and 16 other Estonian companies.
Definitely suggets the event to meet companies, investors and innovative people from Denmark and their neighbouring countries (e.g. Germany). Great thanks to Enterprise Estonia and Ministry of Foreign Affairs to support Estonian companies there.

ITUUDISED.EE
18 Eesti idufirmat otsisid Taanist investoreid
18 Eesti idufirmat käisid Kopenhaagenis Skandinaavia suurimal...

ELISA JA SUPERHANDSI KOOSTÖÖ AITAB PÄÄSTA MILJONEID RMK ISTIKUID

24.01.2019

Tehnoloogia- ja tarkade lahenduste ettevõte Superhands koostöös Elis võimaldavad kaitsta miljoneid RMK istikuid öökülmade eest, teavitades töötajaid reaalajas istikute juures olevast õhutemperatuurist.

Postimees

Eesti oma elektroonikatööstuse hitid teevad ilma põldudel ja Hiina lennuväljadel

Heikki Sal-Saller

6. september 2019, 22:44
3 min lugemist

eAgronom elisa RMK EZIIL Teede Tehnokeskus

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Plans and market:

Short term (during 2020) – Creating strong market presense. Focus on distributing hardware solutions. 1000 connected devices, expanding to European markets, patent-pending-stage.

Long term (2021 and onwards) – Rapid expansion of business solution. 1 000 000 connected devices, switching focus from hardware sales to technology licensing, analytics and visualization solutions.

Business model and go-to-market strategy

During 2020 we aim to generate revenue from hardware sales and monthly service fees (visualization, integrations, user accounts, device management). In cooperation with partners we aim to find tune business model to link our revenue with solar plant output power and efficiency (linking our revenue with real value add to the customer) increase.

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Competition:

- Companies:
  - Solar-Log (Germany)
  - Inverter and Meter vendors (e.g. ABB, Huawei, SolarEdge)
    - Competitors use vendor vertical solutions, but mix of different vendors are typically needed at different sites of solar power production company portfolio. Additionally competition uses previous generations of technologies (communication, server, integration, device management and activation, visualization) compared to our new wireless connectivity, battery, device management and visualization solutions.
  - Pistrik I-V (Estonia)

- Technologies:
  - Sigfox
  - 5G
  - LoRA

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Initial investment/funding need:

- 220k -250k euro:
  - Technology development
  - Additional sales and marketing power
  - Expansion to European markets