

# Enter Spime

Base<sup>n</sup>  
Millions of..

ANY THING



SPIME



ANY SCALE



Pasi Hurri, President & CEO

## Who is BaseN and Why?

BaseN is a **Global Internet of Things (IoT) Operator**. BaseN Platform is a highly scalable, inherently distributed and fault tolerant Platform for **spimes** in the Internet of Things (IoT). We **digitalize and connect** new and traditional industry products and services.

- Serving customers in 80 countries
  - Industrial, IoT, ICT, Telecom
  - SaaS since founding (2001)
- Developed exclusive IoT Platform for the last 14 years
  - Fully owned IPR
  - Designed to be real-time, extremely scalable, fault tolerant and in inherently distributed
  - Suitable for mission critical applications
- Currently processing **902.000 spime transactions per second** out of 12 data centers globally



Smart energy



Wearables



Smart buildings



Connected cars



Smart factories



eHealth



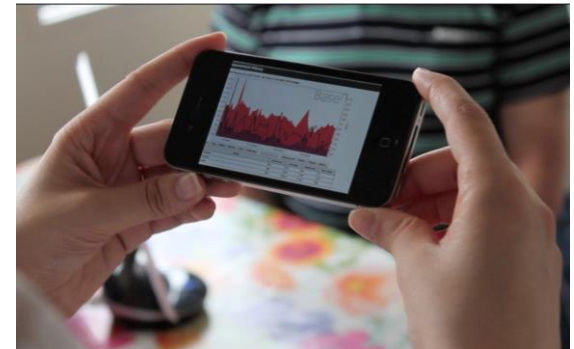
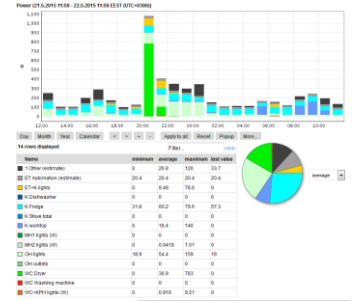
Smart agriculture

# Everything-as-a-Service

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## BaseN Platform applications in production

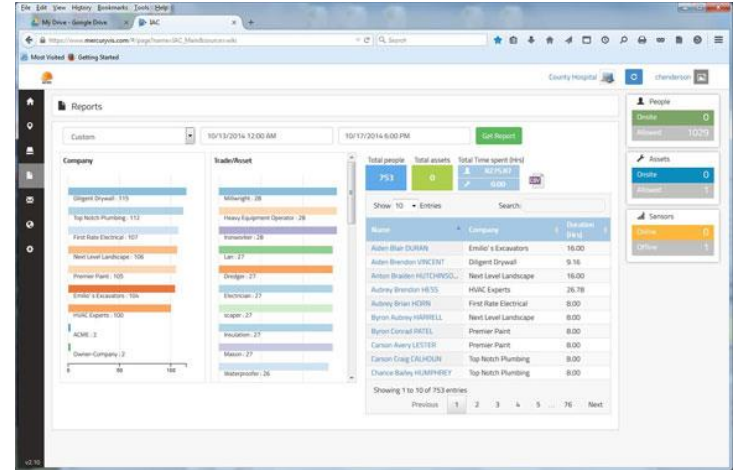
- Global construction site control solution
  - Personnel and tools via RFID
- Smart Building and Energy
  - Cloud based management of industrial and residential buildings
- Smart Living and eHealth
  - Elderly Healthcare using wrist sensors
  - 24/7 security services
- Datacenter and energy management
  - Computing hardware, electricity, cooling, UPS
- Industrial automation
  - Managing solar and wind inverters (drives)
- Full telecom OSS solution
  - Integrated fault and performance management



# Example: RFID/NFC Tags

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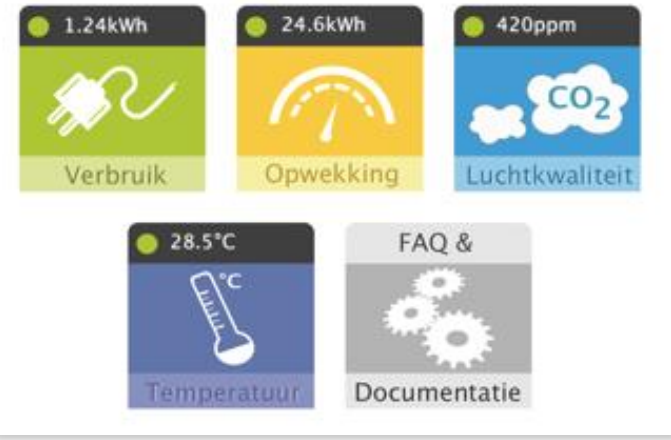
- RFID tags are already widely in use to retrieve information from devices and/or environments
- BaseN works with RFID or NFC tag enabled **access control and contract workers location tracking** – gathering, storing and correlating data from RFID/NFC readers to secure that only authorized personnel enters the scene, e.g. a construction site
- Providing real-time monitoring and gate control, as well as historical reporting
- Retail warehouse **inventory tracking**, with **automatic order creation** based on thresholds of volume of goods monitored real-time through RFID or bar code tags



# Example: Home Automation

**Case: VolkerWessels** (<http://www.volkerwessels.com/>)  
(See also: **BaseN case study VolkerWessels.pdf**)

- Managing the **full lifecycle of zero energy houses** built by Dutch construction company VolkerWessels
- House owners have full transparency to actual energy efficiency
- BaseN enables quality improvement through **measurement and control** of all equipment and appliances' specific electricity consumption



# Example: Security/Surveillance

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**Case: TurvaTiimi** ([www.turvatiimi.fi](http://www.turvatiimi.fi))

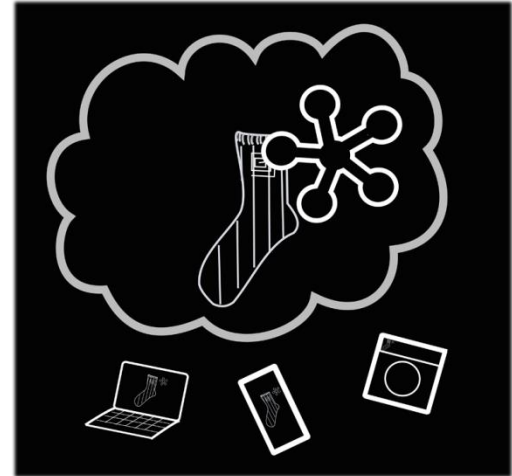
Large Nordic security company

- Responda 113 is TurvaTiimi **Internet of Things (IoT) security** approach to:
  - Consolidate information from various sources
    - Alarm loops, radio based systems, cameras etc.
  - Store and analyze the data
  - Present the data and react based on the rules related to the issue



# Case: Wearables

- A sock is equipped with an RFID tag costing <1€
  - Conducting threads detect wear, stretch and temperature
  - Tag is read regularly, e.g. with a phone or a reader-equipped washing machine
  - Data is processed in a sock Spime utilized by the sock manufacturer
- Result: Socks-as-a-Service
  - Manufacturer sells Spimes and continuously delivers products which adapt to customer's lifestyle
- Extend thinking from Smart Devices to premium clothing, all the way down to socks.

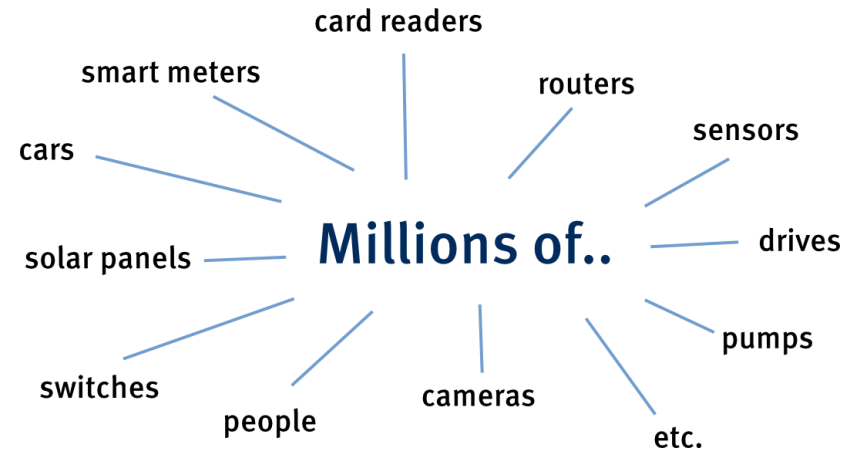


# Enter Spime

Spime: Space and Time (Object)

Spimes are the core objects of the IoT. They:

- Record & manage the **entire life cycle** of Things & their environment
- Securely host complex, adaptive algorithms, which **analyze** and **control** the Things
- Truly enable the transformation from **product to service** businesses

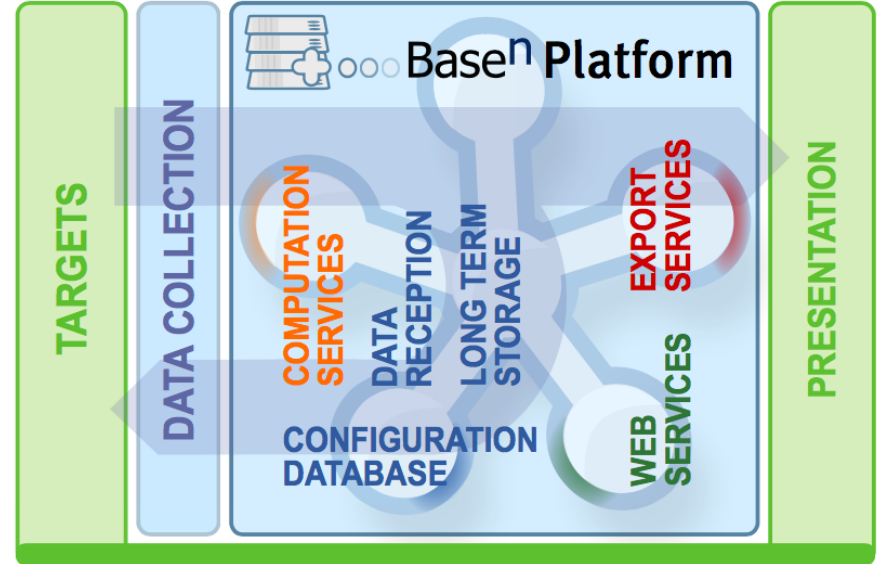




# Why BaseN and How?

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Millions of..

- BaseN develops, builds and operates a Platform capable of handling billions of spines globally
- Own infrastructure
- No external dependencies (to commercial software or even to open source)
- Control of the full value chain
- Buying wholesale bulk capacity from carriers and co-location providers

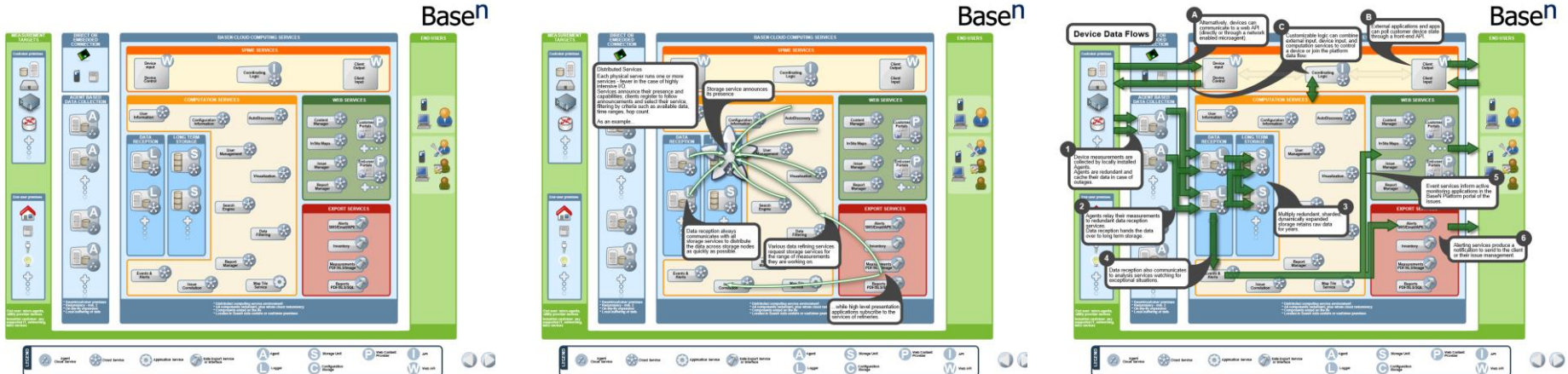


# The Secret Sauce



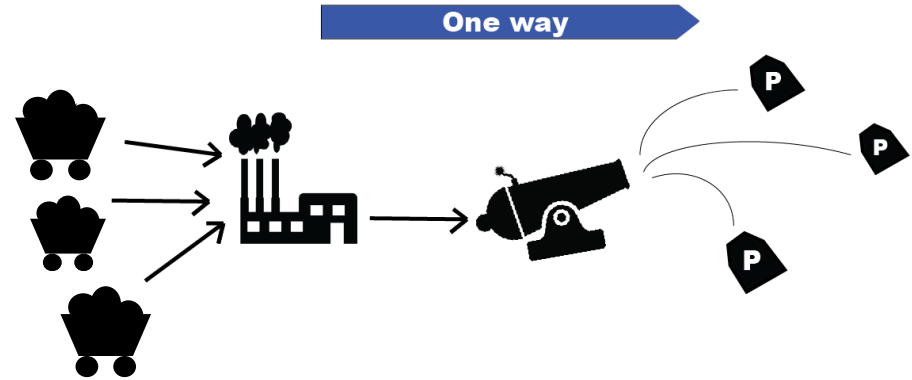
- Fully controlled value chain from raw telecom capacity and server hardware, all the way to the application and presentation layers
- Technical and above all commercial scalability to billions of Things due to independence from third party database and other vendors, and also from any restricting open source platforms
- Inherently distributed and fault tolerant architecture, inspired by military radar systems

See separate 'BaseN Platform Logical Architecture.svg' for details



# Customer Disconnect

- Without spime:
  - The **manufacturer loses track of the produced product** – unless there are complaints to customer service
  - Gathering detailed feedback on product usage is **costly and time-consuming**
  - **Only tie** to product's origin is the brand name somewhere written on it

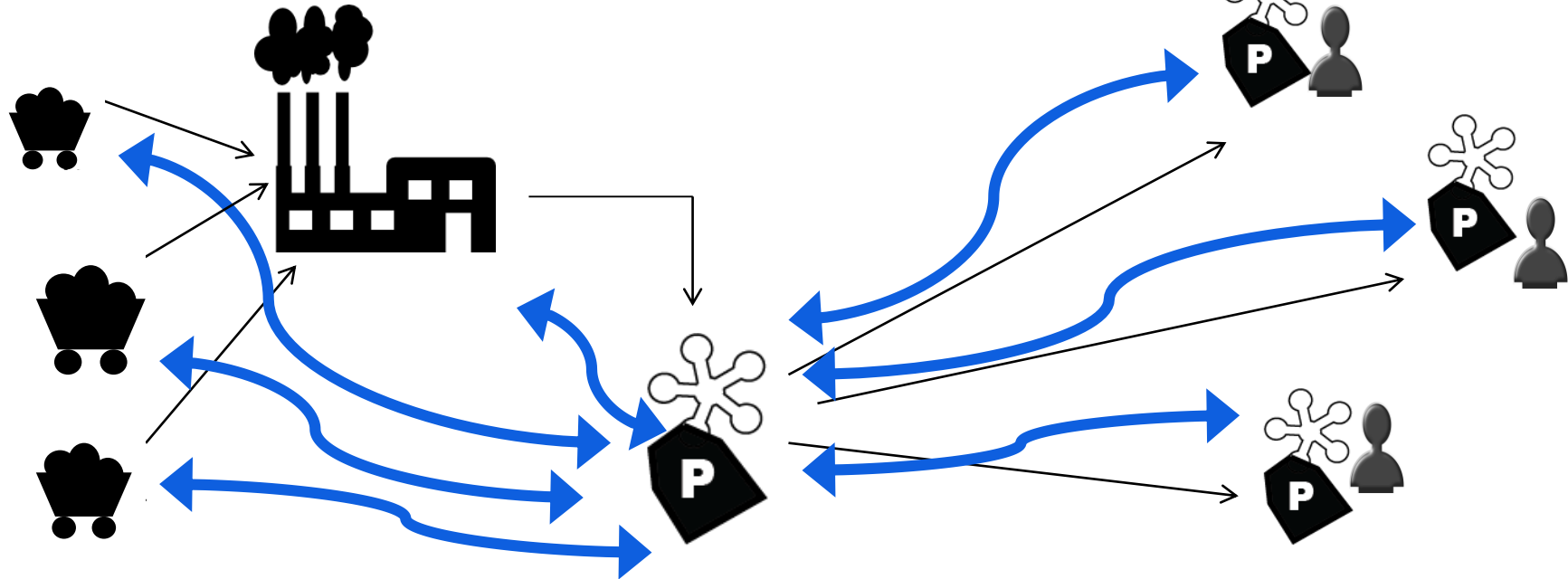


# Get spimed with BaseN

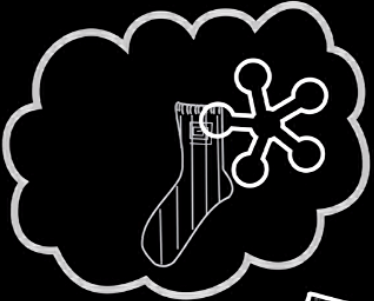
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Always bi-directional



Visit: [basen.tv](https://basen.tv)



The sock spime knows everything.



Spime would let you sleep better and healthier.



Spime Sweet Spime.



...connecting and spiming the apple.

# Get spimed with BaseN

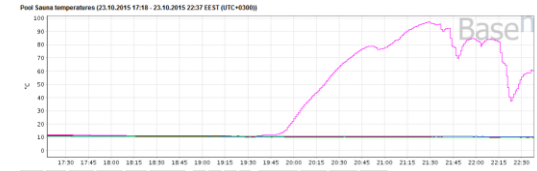
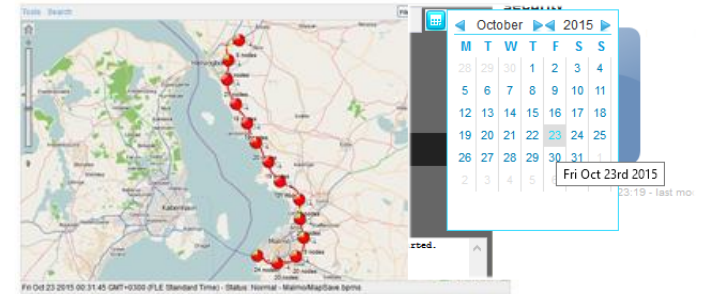
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- Spime comes into existence before anything is manufactured and immediately collects information, e.g. of all components needed to create the physical object
- Once the object is manufactured, spime continues recording its lifecycle and evaluating its environment
- Manufacturers stay in touch with their products beyond the production line, but also establish perpetual relationships with the product users
- Spime enables constant **product improvements, fast R&D cycles** and **rapid development of new services** for their customers



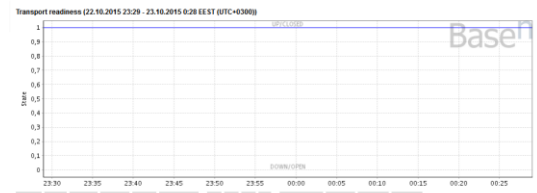
# Mobile Sauna & Pool, Spimed

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4 areas analyzed

Name	minimum	average	maximum	last value
Indoor compartment	10.4	10.8	11.2	10.4
Outdoor	9.6	10	10.6	9.6
Pool	9.8	10.4	11.6	9.8
Sauna	10.8	45.1	97.2	66.4



Transport readiness (22.10.2015 23:29 - 23.10.2015 0:28 EST (UTC+0300))

Name	minimum	average	maximum	last value
Sauna Door state	UPCLOSED	UPCLOSED	UPCLOSED	UPCLOSED
Support feet state	UPCLOSED	UPCLOSED	UPCLOSED	UPCLOSED



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[www.basen.net](http://www.basen.net)**

**Featured presentations:**

"IoT and the Connected Site"

Satyan Shah, Technical Director, Solutions at [Trimble Navigation](#)

"Public Services IoT"

Martti Ylikoski, Mobile Broadband Architect, Nokia Networks

"Who Watches The Things That Watch You?"

Johan (Julf) Helsingius, [ICANN GNSO Council](#) and BaseN Board of Directors

"Digitalization and IoT Platforms"

Pablo Moreno, CEO and Founder [activeS](#)

**For IoT developers:**

Work with the leading Spime Platform in a Hackathon-style competition



# Spime In

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