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Partner ecosystems and strategy as enabler to API development

THTH Spring Webinar

May 18th, 2022

Marjukka Niinioja, Osaango

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Nice to meet you!

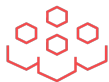**Marjukka Niinioja, Founding partner at Osaango**

Osaango Ltd founder, consultant and trainer. Marjukka has been named TIVI-magazine top 100 IT-influencers 2018-2021. She is co-author of API Economy 101 and co-founder of The API Collective.

Osaango Ltd

We are a specialized boutique consultancy. We focus on consulting on smart business ecosystems and underlying APIs, data and operational technology

Our clients

Our customers are medium and large enterprises in fintech, media, legal, education, public sector, technology, building and construction.

@osaangoltd
@mniinioja
www.osaango.com

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Osaango is part of The API Collective, global API specialist consultants. More details from www.theapicollective.com

Osaango is a dedicated member of the API and Platform Economy community

- Member of the OpenAPI Initiative and Technical Steering Committee participating in OpenAPI 3.X development

- Organizer of apidays Helsinki – part of the apidays Global conference series and community https://www.apidays.co/helsinki/

- Global community management of APIOps http://apiops.info/

- Development and training of openly licensed, Lean and business-oriented APIOps Cycles method www.apiopscycles.com

- Founder Marjukka Niinioja is one of the co-authors of API Economy 101, a business and technology book on APIs and Platforms https://www.apieconomy.info
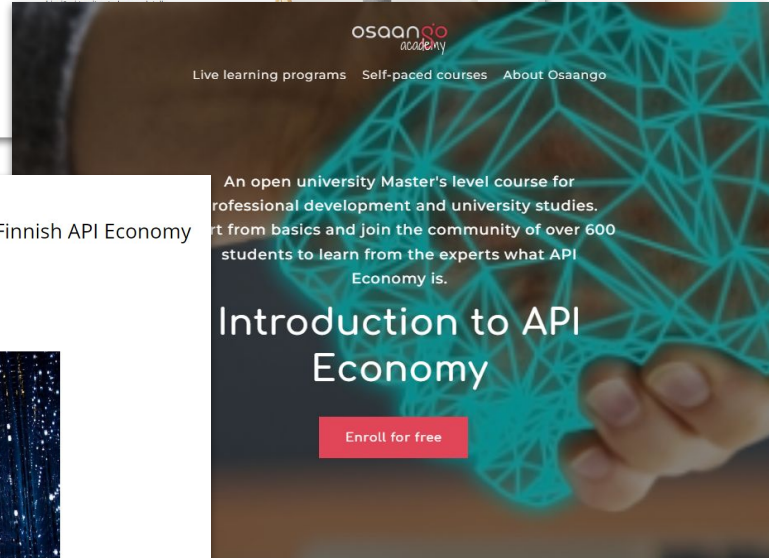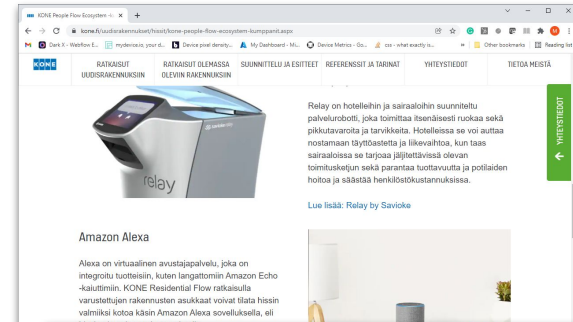
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Customer case

KONE ecosystem

KONE is on a great start with building their own APIs as well as an ecosystem. Osaango helped KONE to solve one of the biggest showstoppers, educating the ecosystem about the business opportunities with using APIs.

https://www.tuni.fi/en/news/tampere-university-and-kone-export-finnish-api-economy-education-china-and-germany

https://www.osaango.academy/courses/intro-to-api-economy

Relay on hotelleihin ja sairaaloihin suunniteltu palvelurobotti, joka toimittaa itsenäisesti ruokaa sekä pikkutavaroita ja tarvikkeita. Hotelleissa se voi auttaa nostamaan täyttöastetta ja liikevaihtoa, kun taas sairaaloissa se tarjoaa jäljitettävissä olevan toimitusketjun sekä parantaa tuottavuutta ja potilaiden hoitoa ja säästää henkilöstökustannuksissa.

Lue lisää: Relay by Savioke

Amazon Alexa

Alexa on virtuaalinen avustajapalvelu, joka on integroitu tuotteisiin, kuten langattomiin Amazon Echo -kaiuttimiin. KONE Residential Flow ratkaisulla varustettujen rakennusten asukkaat voivat tilata hissin valmiiksi kotoa käsin Amazon Alexa sovelluksella, eli

Press release

Tampere University and KONE export Finnish API Economy education to China and Germany

Published on 24/11/2020

Tampere University

APIs (Application Programming Interfaces) have become an inseparable part of modern business models. APIs allow a dynamic and efficient exchange of information between various digital systems. They can be used

osaango academy

Live learning programs   Self-paced courses   About Osaango

An open university Master's level course for professional development and university studies. Start from basics and join the community of over 600 students to learn from the experts what API Economy is.

Introduction to API Economy

Enroll for free

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Why data doesn't flow?

Internal or partner communication and collaboration is lacking, especially with digital and data partners, including software developers.

Partner and customer journeys involving data resemble an obstacle course.

Data modelling and architecture is not fit for external use cases and interfaces (APIs).

Unmanaged roles, processes and architecture to support strategic goals, continuity, cost-optimization and data flows

Ecosystem partners, services, business models, technology and/or management for data and integration partners is unclear

Unclear information of the existing IT architecture as data providers/consumers and related to security

Data economy maturity
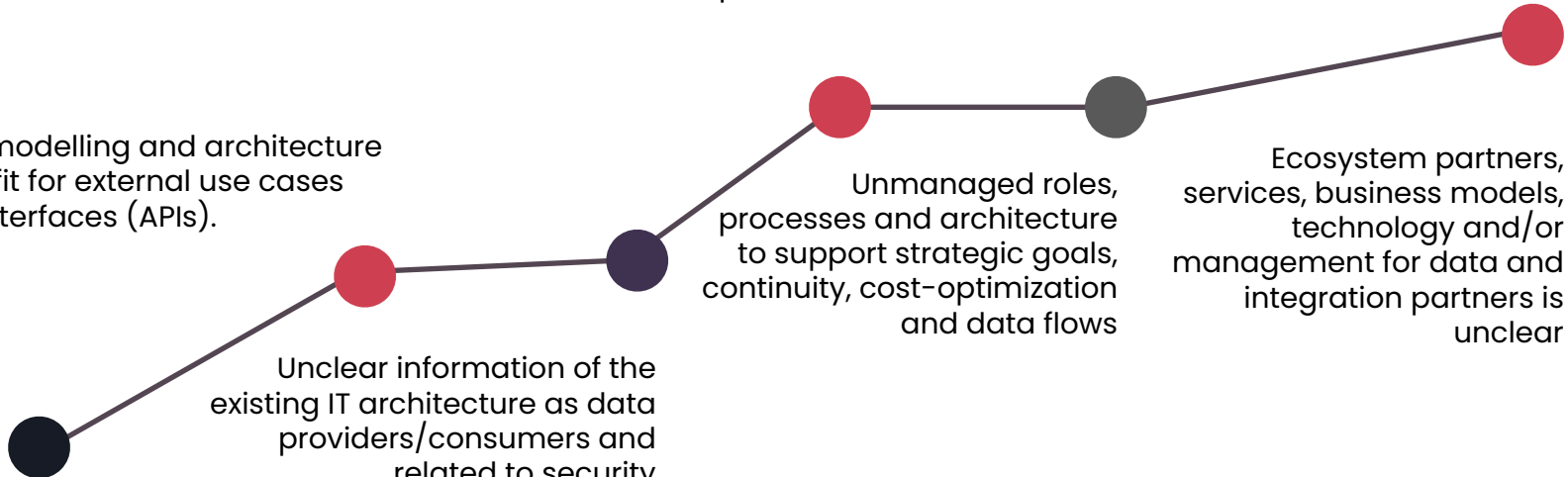
Competitive edge?

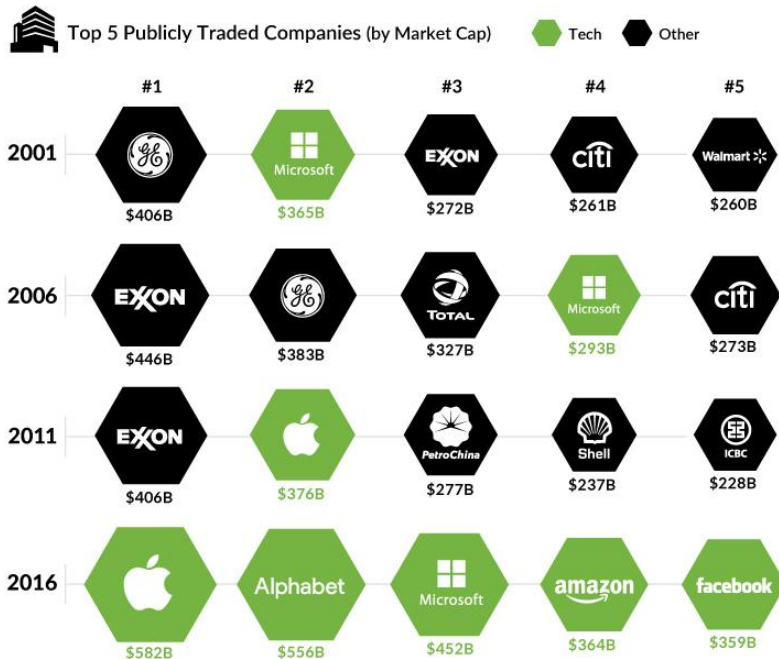In the era of ecosystems, networks and platform economy, competitive edge is made up of

- customer understanding,
- Product or service quality
- Fit for customer need
- Business model i.e. the way that customers and stakeholders' needs are fulfilled.

The change in business models and competitiveness is based strongly on platform economy and API economy

Chart of the Week

THE LARGEST COMPANIES BY MARKET CAP
The oil barons have been replaced by the whiz kids of Silicon Valley

Top 5 Publicly Traded Companies (by Market Cap)   ■ Tech   ■ Other

	#1	#2	#3	#4	#5
2001	GE $406B	Microsoft $365B	EXXON $272B	Citi $261B	Walmart $260B
2006	EXXON $446B	GE $383B	TOTAL $327B	Microsoft $293B	Citi $273B
2011	EXXON $406B	Apple $376B	PetroChina $277B	Shell $237B	ICBC $228B
2016	Apple $582B	Alphabet $556B	Microsoft $452B	amazon $364B	facebook $359B

visualcapitalist.com

What is API Economy?

"In API Economy company utilizes resources efficiently and quickly to create added value for own customers. These resources can be for example data or function provided by other organizations.

Building blocks utilized are own APIs and open APIs provided by other organizations (free or commercial) in addition to developer communities. These enable quicker adaptability to unpredictable and faster changing customer needs.

Defining characteristics of API Economy are competing for popularity among application developers and considering them as primary customers. In brief, services are offered from businesses to developers (Business-to-Developers, B2D)."
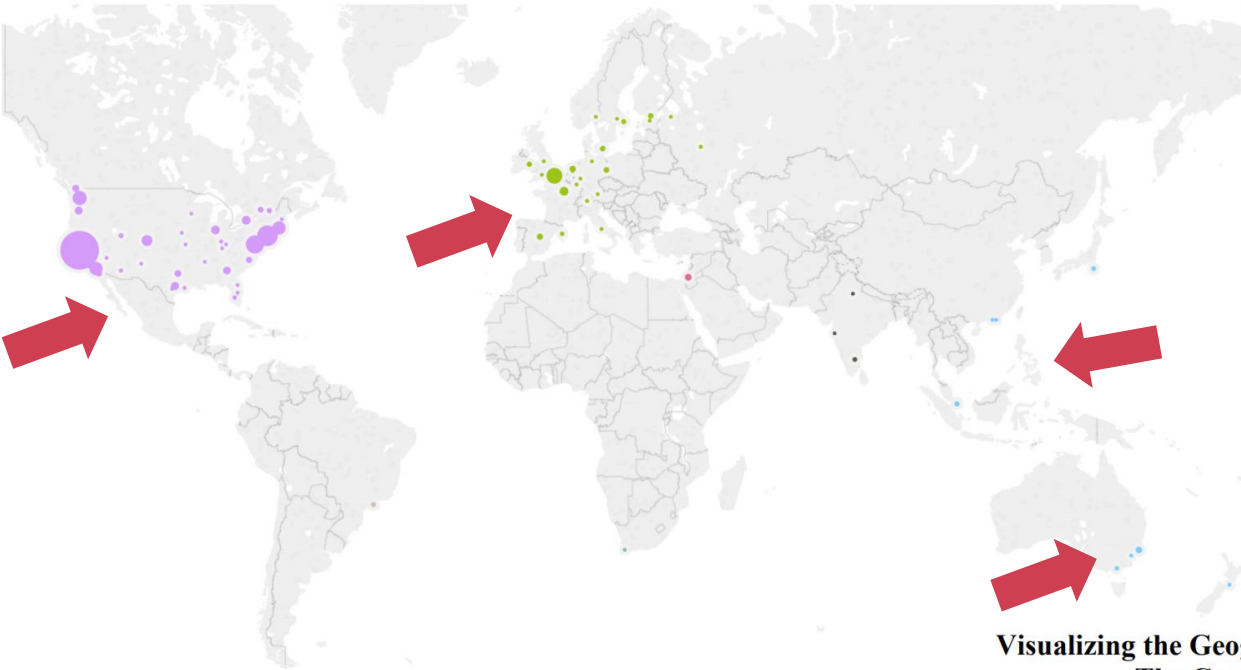
Moilanen J., Niinioja M., Seppänen M. & Honkanen M. 2019. API Economy 101

In the scarce world of API research, this provides important view on APIs, from global economy point of view.

How can we make APIs more widely adopted?

Figure 1. Global API locations

**Visualizing the Geography of Platform Boundary Resources:
The Case of the Global API Ecosystem**

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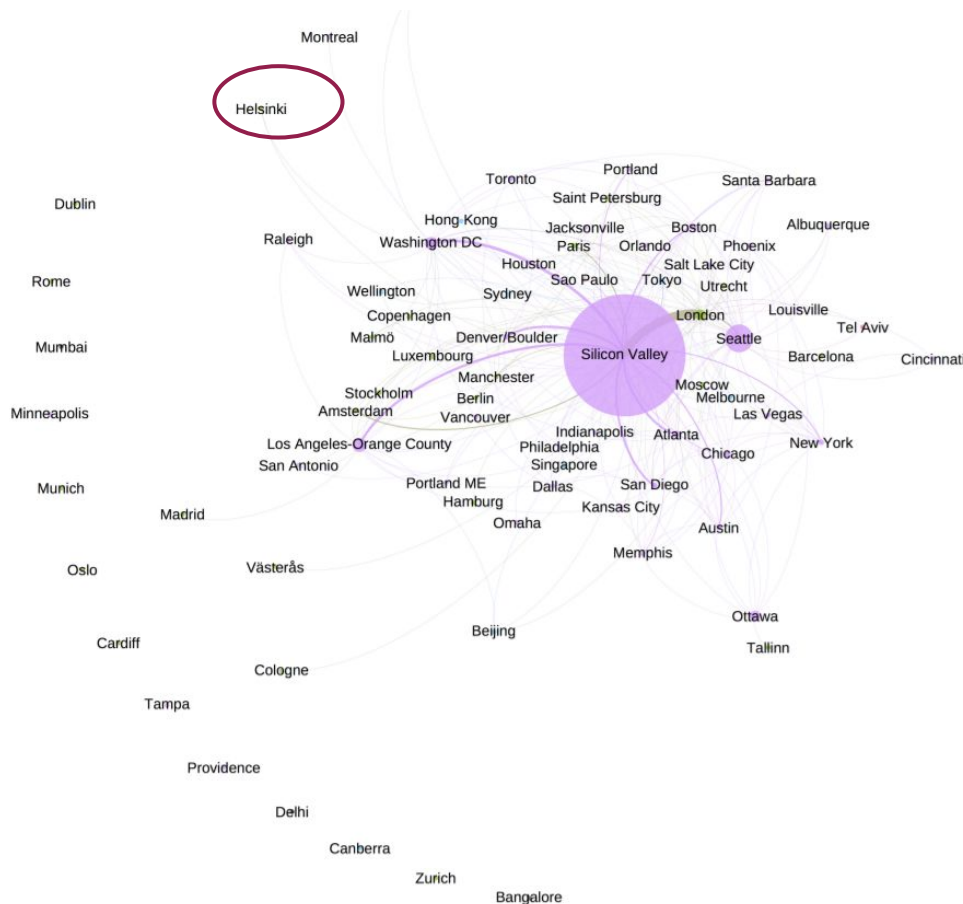marko.seppanen@tut.fi

Figure 2. API co-use between entrepreneurial regions

Amount of APIs correlates with Global Startup Index and economic growth areas.

APIs thrive in cultures where user-centered design is dominant.

Mashups combining several APIs require certain amount of co-location and mindset for marketers and developers to co-create.
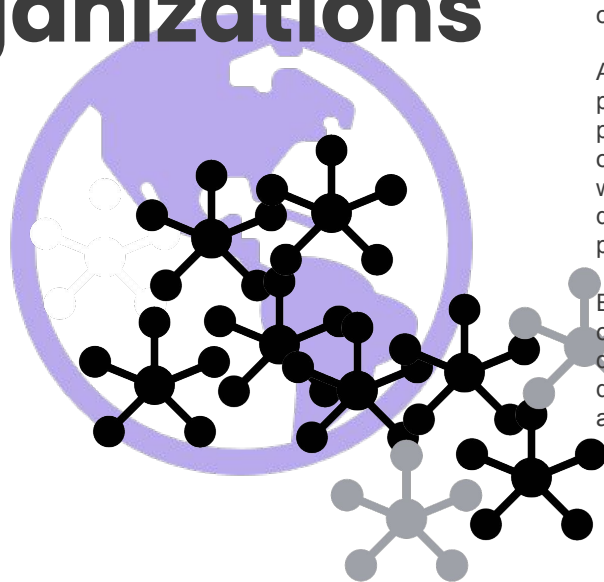
Source: Huhtamäki & al. Visualizing the Geography of Platform Boundary Resources: The Case of the Global API Ecosystem

APIs enable scaling and distribution of products, services and organizations

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Internal API development causes organizational changes from within.

APIs provide possibilities to use external parties as innovators and service providers. This enables and forces organizations to open up and think of ways to collaborate with external developers, ecosystems and API providers.

Ecosystem and platform orientation creates opportunities for external developers to voice their needs to development roadmaps, both business and technical.

"Integration orientation"

Read more in Chapter 11 of API Economy 101 e.g. Bosch, J. – Bosch-Sijtsema, P. 2010. From integration to composition: On the impact of software product lines, global development and ecosystems. Journal of Systems and Software, 83(1), s. 67-76)

"Ecosystem and platform orientation"

Platforms and APIs are used to build ecosystem customer journeys

Customer journey combined from resources provided by individual providers via APIs

- Awareness APIs
- Sense APIs

- Analytics and content APIs

- Recommending products
- Personalized offers

- Ordering with voice

- Optimizing routes
- Automated maintenance calls

- **Fraud detection in payments**

"The ecosystem together generates value for its end-customers by integrating functionally interdependent subsystems. "(Source: In API Economy 101 book from Mäkinen – Dedehayir, 2013; more specifically Han, J. et al. 2017. Uncovering the conceptual boundaries of the ecosystems: Origins, evolution and future directions.)

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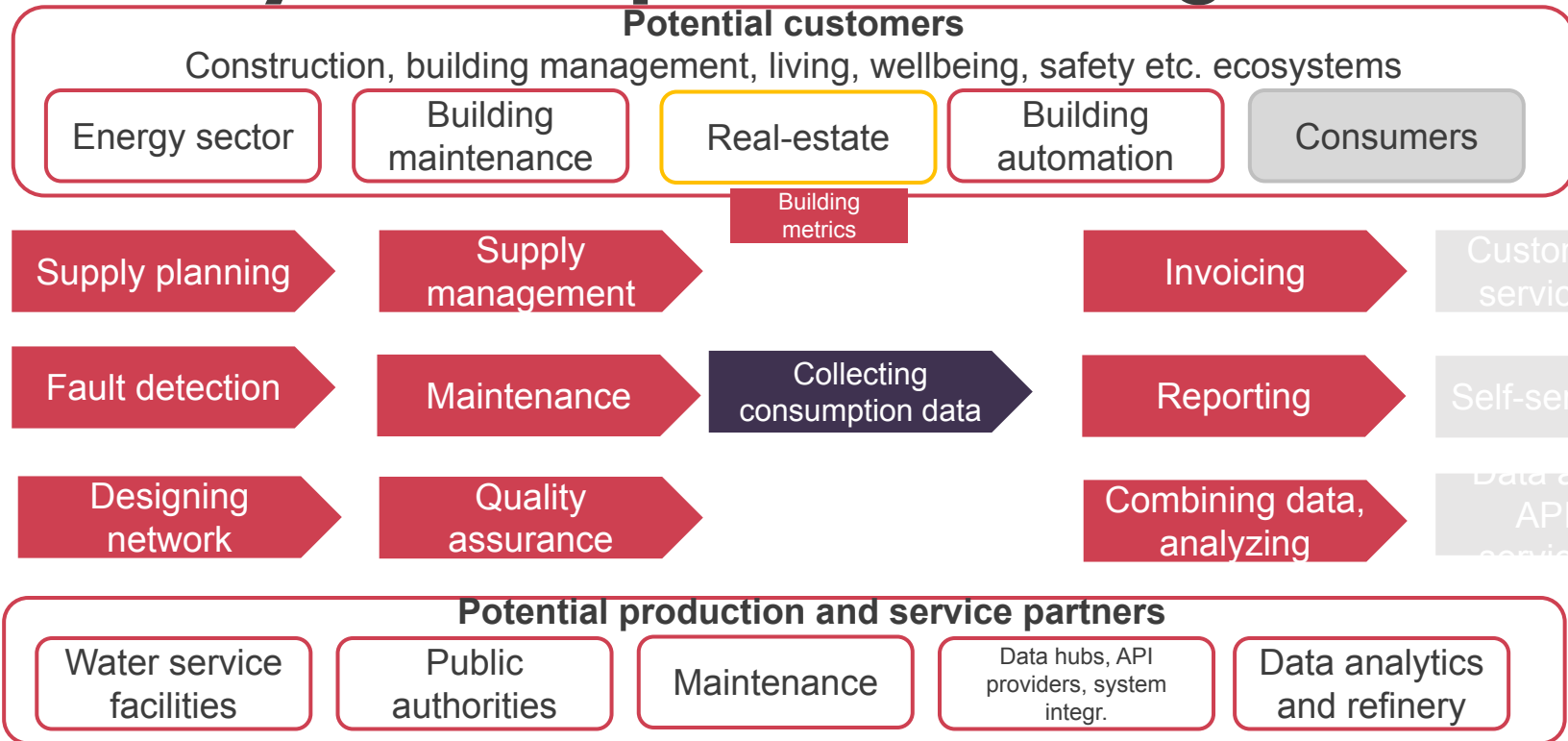| API is...	Description	Example	Type of API
Important feature of a tangible product	API is part of a tangible product or productized service. Customer gets the API as part of the deal when buying the product.	Internet of Things (IoT) APIs for controlling and analyzing state of things like home appliances or sensors	Partner or public, sometimes also private
Productized service	API in itself is a productized service, offered to all customers in the same way	Translation APIs, Payment APIs	Public API
Part of a digital or real-world service	API is part of the service experience, for example maintenance service is ordered with an API, or you can monitor package delivery with an API	Logistics API	Partner or Public API
Customer-specific service	API is part of a service offered to customers as a tailor-made solution including for example an integration to a service providers system.	APIs in customer specific applications	Partner
Interface to resources	API is just a means to access a resource the company is selling	Company info APIs (risk category, owners, contact information). Cognitive APIs etc.	Open data APIs, Partner APIs
Interface to platform (boundary resource)	API is a means to connect with a platform and get added value through participation in the interconnecting relationships of the platform (in Platform Econonmy business model)	Online auction API, Apartment sharing API	Partner or Public
Part of an integration	API is means to connect in to applications and devices	Product API, Employees API, business transactions API	Internal or partner API

Niinioja Marjukka. 2018. Translated and revised version. Published in a book about API Economy 101 (2019) by Moilanen, J., Niinioja, M., Seppänen, M., Honkanen, M.

Example from water services ecosystem – potential target state

Potential customers

Construction, building management, living, wellbeing, safety etc. ecosystems

Energy sector	Building maintenance	Real-estate	Building automation	Consumers

Building metrics

Supply planning · Supply management · Invoicing · Customer services

Fault detection · Maintenance · Collecting consumption data · Reporting · Self-service

Designing network · Quality assurance · Combining data, analyzing · Data and API services

Potential production and service partners

Water service facilities	Public authorities	Maintenance	Data hubs, API providers, system integr.	Data analytics and refinery

Traditional customer journey and systems

Construction company/real-estate owner as a customer of water services

Construction company plans a new building	Water consumption and quality estimates for budgeting and pipeline choices	Service pipe locations for planning	Remote water meter (building) installations	Consumption data gathering and analytics	Smart building controls	Operations

Construction company's planning systems

Building maintenance systems

Water services provider's systems

- Pipeline network data
- Consumption data
- Water quality data
- Fault detection and maintenance data
- Customer data
- Invoicing data

API Value Proposition Canvas

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And then imagine water services data provider partner would decide to provide this…

Let's imagine we could have any APIs we wanted as the API consumer…
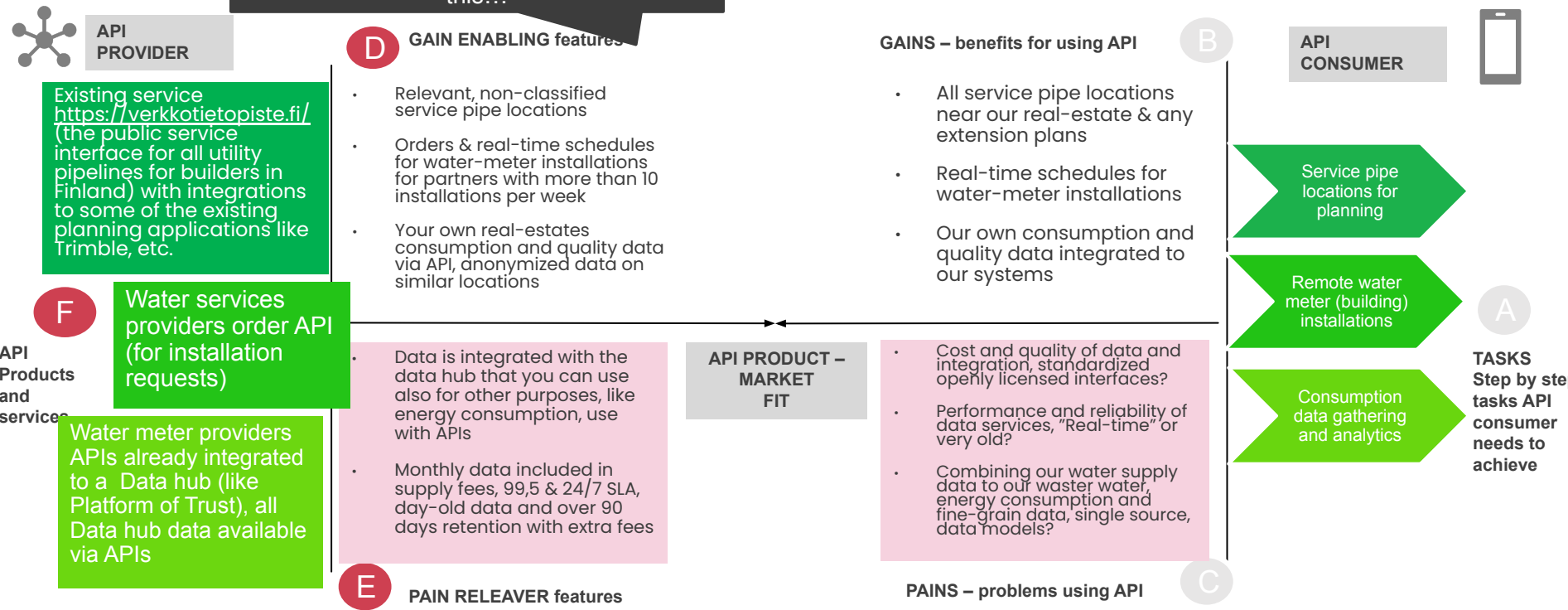
API PROVIDER

API CONSUMER

D **GAIN ENABLING features**

- Relevant, non-classified service pipe locations
- Orders & real-time schedules for water-meter installations for partners with more than 10 installations per week
- Your own real-estates consumption and quality data via API, anonymized data on similar locations

GAINS – benefits for using API **B**

- All service pipe locations near our real-estate & any extension plans
- Real-time schedules for water-meter installations
- Our own consumption and quality data integrated to our systems

Existing service https://verkkotietopiste.fi/ (the public service interface for all utility pipelines for builders in Finland) with integrations to some of the existing planning applications like Trimble, etc.

Service pipe locations for planning

F Water services providers order API (for installation requests)

Remote water meter (building) installations

A

API Products and services

Water meter providers APIs already integrated to a Data hub (like Platform of Trust), all Data hub data available via APIs

API PRODUCT – MARKET FIT

- Data is integrated with the data hub that you can use also for other purposes, like energy consumption, use with APIs
- Monthly data included in supply fees, 99,5 & 24/7 SLA, day-old data and over 90 days retention with extra fees

- Cost and quality of data and integration, standardized openly licensed interfaces?
- Performance and reliability of data services, "Real-time" or very old?
- Combining our water supply data to our waster water, energy consumption and fine-grain data, single source, data models?

Consumption data gathering and analytics

TASKS Step by step tasks API consumer needs to achieve

E **PAIN RELEAVER features**

PAINS – problems using API **C**

API Canvas

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Developer experience

More potential API consumers

Development activities

Key Partners — 8

- Water meter technology companies
- Water services providers

Key Activities — 6

- …

Key Resources — 7

- …

API Value Proposition — 1

- Water consumption and quality data for your building / real-estate in a standard format
- Integrate with all the other utility data

Name of the API

Water cons. API

Relationships — 3

- Support, communications, sales etc.…..

Channels — 4

- ► Construction planning software providers
- ► Data hub providers
- ► Own developer site

API Consumer Segment — 2

- Construction planners
- Real-estate owners
- Construction planning software providers
- Building maintenance and autom. companies
- Energy companies
- Security of supply bodies
- Water services systems

Costs — 9

Integration support, Data storage and maintenance

Developer community growth and management

API, SDK etc. Development

Other risk reducing costs (see Business Impact)

Revenue Streams — 5

- XXXX € / month
- Monthly data included in supply fees, 99,5 & 24/7 SLA, day-old data and over 90 days retention with extra fees
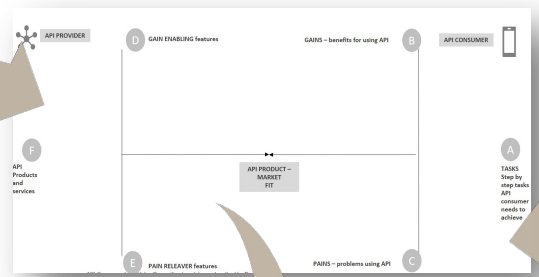- More quota and more sources = more revenue

Similar API, but with anonymized or pseudonymized data and different SLA could be used for open data API

Partner experience

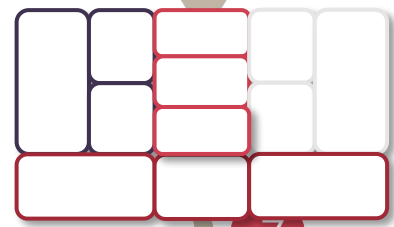**FEEDBACK** (Qualitative and quantitative, technical and satisfaction, f.eg. API requests, errors, support requests, Conversion rate, drop-out, MRR, NPS, CES)

PREVIOUS EXPERIENCE

PRE-PURCHASE TOUCH POINTS

Channels (brand owned, partner owned, customer owned, social):
Search engines, cloud platforms, API marketplaces, blogs, social media, company website, company's developer center, extranet, intranet

AWARENESS

ENGAGEMEN T

COMPARISON / NURTUR

PURCHASE TOUCH POINTS

TRANSACT

POST-PURCHASE TOUCH POINTS

USAGE

CUSTOMER SUCCESS

ADVOCACY

FUTURE EXPERIENCE

Developer journey

Above & Below ground actions to support the partner experience and developer journey

Niinioja, M. (2018) adapted from picture "Current customer experience" in article by Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, *80*(6), 69-96.
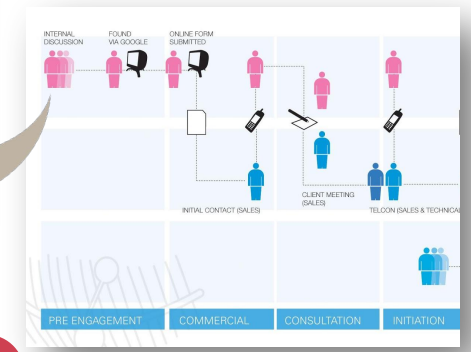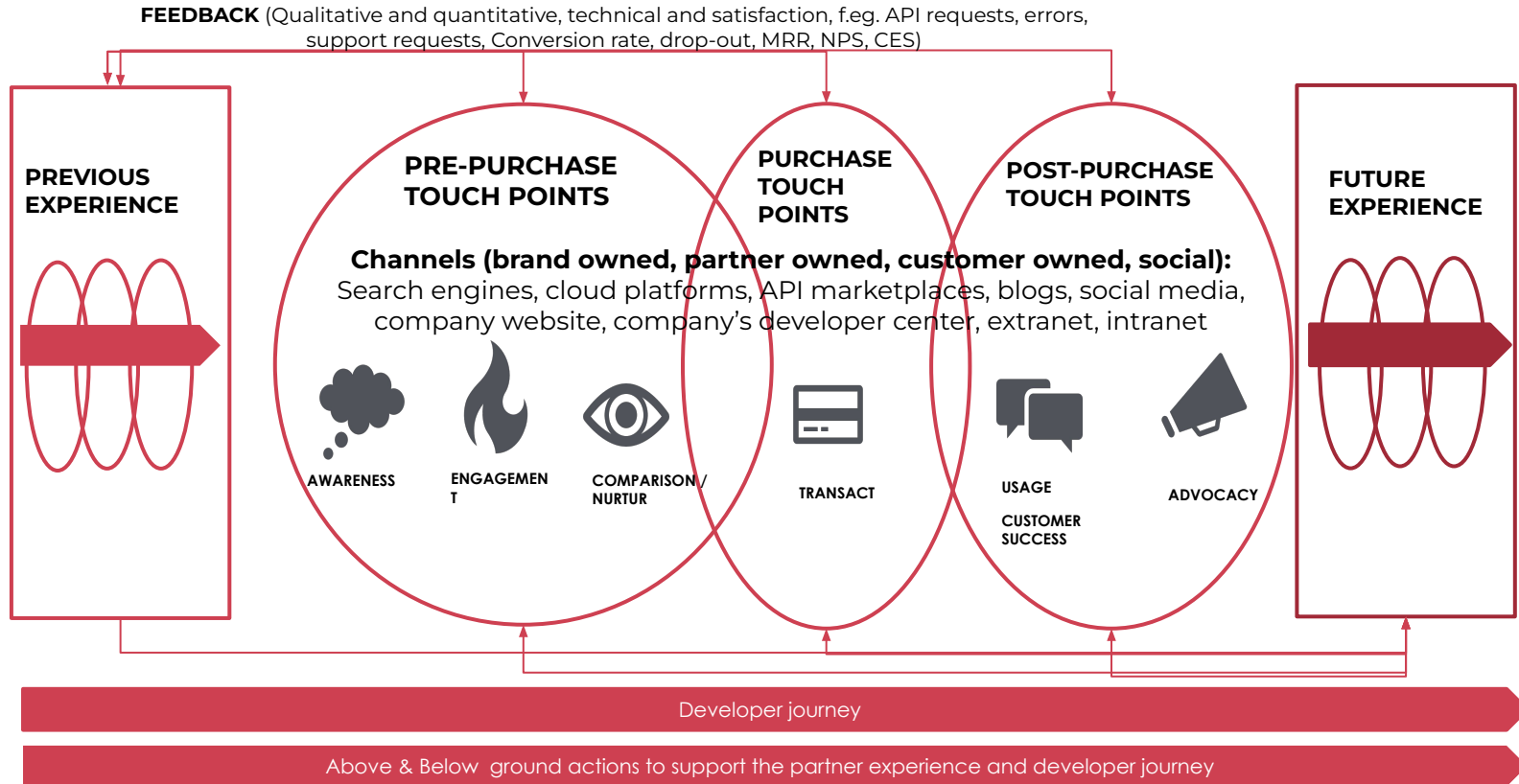
Futudemy ecosystem & program to speed up API innovation
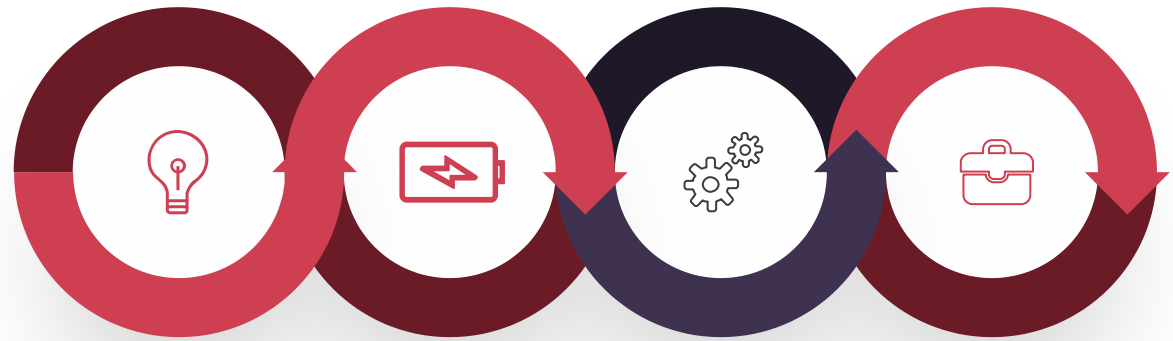
Your goals

| Cultivate data & API innovation | Power up with benchmarks | Fit API designs to value propositions | Raise strategic thinking |

The session flow and methods allow for **maximum amount of learning on communication, ideation and innovation with APIs** that can be used for real product development work. The actual contents, the ideas to be worked are fully customizable and depend on the ideas and interests of the participants / organization.

Futudemy sessions

1 Boarding

2 Ground operations

3 Take off

4 Landing

What are the business and technical possibilities with data & APIs? Methods to think outside of the box?

Discover customer needs, data sources, existing APIs from your and other organizations

Prepare for pitching: How your idea can be realized and validated? What APIs do you need?

Learn by pitching your data & API business opportunity. Get & give feedback from mentors and team.

Let's stay in touch

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