Digital Business Ecosystem

CORE

The Creation of the Linux Foundation DBE Laboratory FI
by Ph.D. Tomi Dahlberg, head of the laboratory

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What needs does the creation of the Linux Foundation DBE Core Lab FI address?

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Need for non-profit open sandbox activities in Finland for open source blockchain, API and related technologies that are encouraged to apply international open process and data standards

- Networks and ecosystems, especially those deploying and/or developing Hyperledger and other Linux Foundation supported blockchain, API and related technology based platforms, solutions and services

Need to promote and apply Linux Foundation's knowledge and result base

- Promote and apply Linux Foundation tools, open source, e-learning materials
- Promote open source code donations to Linux Foundation via Github and Apache licensing

Need to promote, apply and further develop the open to everybody knowledge and result base of DSC Core, MDSS, SmartLog, DBE Core Transport projects

- Contacts and discussions with Linux Foundation started in these projects several years ago including significant donations of open source code to the Linux Foundation
- Provide this opportunity to other relevant projects with results available to everybody
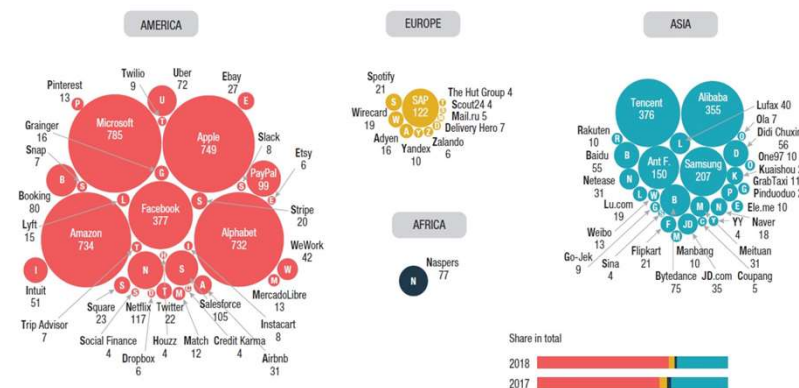
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The big picture of the underlying need addressed: Give Finnish and EU firms a second opportunity

Figure 1: Geographical distribution of the main global platforms in the world, 2018

Source: Holger Schmidt (https://www.netzoekonom.de/vortraege/#tab-id-1 (https://www.netzoekonom.de/vortraege/#tab-id-1)).

So far, the economic activity and the value of digital platforms has concentrated to centralized "single-window" digital platforms governed and managed by few global actors.

We want to be among those who offer to Finnish and EU firms and start-up the second opportunity

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Need to automate the exchange of data in trust-networks is burning – blockchain facilitates this

Reliable and robust technological basis, necessary for rapid diffusion, exists for Blockchain

- Numerous new and emerging technologies are available: artificial intelligence (AI), various forms of robotics, rest API, IoT, data analytics, blockchain,…
- Data analytics will help us to manage the consequences of digital data explosion and to manage with data, and blockchain will facilitate the automation of inter-organizational data exchange.
- No breakthrough innovations are needed, compare this to the challenges of AI in complex issues
- Diffusion resembles that of the cloud services: un-recognized in 2009, rapid diffusion started in 2010/2011, diffusion maturity (>50 %) in 2015, now used daily. Will diffusion be even faster for blockchain?

Blockchain has become mainstream technology in Finland during 2019

- A year ago in 2018 we spoke about POCs, market reports and future plans. Now we hear about releases, experiences and further developments
- Sandbox for learning, workshops, evaluations, pilots, projects, … is still needed to boost development

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What are the activities of the Linux Foundation DBE Lab FI ?

Offer physical facilities at the premises of Helsinki city newco, and together with the partners of the laboratory relevant technology environments for
- Test, proof of concepts, pilots with applications and platforms – DBE Core and Peppol platforms available at the start
- R&D, research and other projects – DBE Core Transport Co-innovation project first potential
- Workshops, for example to innovate new services, applications, educational materials, …
- Hackathons to develop, test and pilot new code according to the principles of Linux Foundation
- Education
- Place for discussions and networking

Partners are encouraged to offer their solutions and services to above mentioned activities under terms agreed with a partner

General meetings with remote access, meetups, materials and newsletter
- Objective to establish Blockchain room to the premises of Helsinki city newco

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What are the deliverables and the value to the Linux Foundation DBE Lab FI partners?

Deliverables
1. Open source code, services, materials, innovations developed in or connected to Finland that are offered to EU and global markets, which have been developed, tested and implemented by applying open global standards and tools
2. Donations of open source code to Linux Foundation via Github and Apache back-lisencing
3. Permissioned use of openly available results by making them available to anybody

Value to partners
1. Ability and facilities to test, evaluate and pilot blockchain, API and related technologies, UBL, PEPPOL and other process and data models in a safe environment outside of one's internal operative IT environment – the most rapid path to business benefits and ecosystem creation
2. Ability to create integrations to and from backend IS, and to move them into internal operative IT environments when they are tested, mature and robust
3. Access to Linux Foundation and DBE Lab result, knowledgebase and materials
4. Networking to leading experts and to other partners of the laboratory and with other newco enterprises

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Funding and governance of the Linux Foundation DBE Lab FI partners?

Non-profit laboratory managed by DBE Core Ltd
1. Separate accounting to show that the laboratory operates as a non-profit organization
2. We hope that we are able to open the ledger of daily accounts by anonymizing actor names

Facilitators of the Laboratory ½ - 2 persons (during 2020) funded with
1. Annual contribution and membership fee (kannatus- ja jäsenmaksu)
2. Donations from private persons, firms, public and private organizations, foundations
3. Potentially crowd-funding – to create a financial buffer for the funding of shared infrastructure and unexpected costs

POCs, pilots, projects, workshops, education funded with
1. Billed payments that cover the estimated and realized costs of these activities
2. Ex-post final payment to return excess funds to partners. Education revenues used to fund facilitators

Governance bodies
1. Advisory board, general meetings

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There is a long background history behind the creation of the Linux Foundation DBE Lab FI

Research projects lead by Lappeenranta University of Technology (LUT) 2013-2018
- Collect data and analyze the need to automate supply chain data exchange in process industry procurement for both commercial transactions and technical product data exchange
- Evaluation of technologies that could be used to automate and integrate data exchange: Open API, Open data standards, Blockchain, IoT with open source code development

Research and Co-innovation projects lead by Turku School of Economics (MDSS) and Aalto University Business School (DBE Core Transport Co-Innovation) 2017-
- Manufacturing Maritime industry and Logistics and Transportation industries

SmartLog project by Kinno 2017-2019 – Use of blockchain in multimodal logistics

Contacts with Linux Foundations started in 2017 and significant source code donations to Linux Foundation from the above mentioned projects followed in 2018
- The creation of Linux Foundation DBE Laboratory FI agreed at the establishment of DBE Core Oy

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Thank you, I value your comments and feedback

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The DBE Core Platform will Go Live soon!

Welcome to
DBE Core platform Nov. 2019
Linux Foundation Fi DBE Lab by Dec. 2019 (plan)

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