Fast Forward Advisors
Your partners for Innovation & Growth
Tech and Innovation
Ecosystems in Europe

21st International Workshop on Business Incubation
25th October, 2018
Shanghai Caohejing Hi-tech Park Innovation Center
WHAT WILL WE TALK ABOUT TODAY?

1. Introducing FFA
2. European Tech and Innovation Development
3. Factors for Developments
4. 20 Impactful Startup Ecosystems
Introducing:

FAST FORWARD ADVISORS

“FFA”
Fast Forward Advisors is a boutique consulting firm founded in 2011 with HQs and offices in Europe, Asia and associate office in North America. Mainly focused on solving problems / enabling opportunities in innovation, growth and fundraising, FFA has worked with over 50+ startups and 20+ accelerators/incubators in 25+ countries worldwide.
Introducing Fast Forward Advisors

FFA operates in 3 continents, 30+ countries and wide range of industries: automotive, energy, financial services (fintech), biotech, medtech, healthcare, advertising (adtech), marketing (martech), e-commerce, education (edtech), travel
MANAGEMENT BOARD

Luca Mohammadi
Managing Partner Asia

Experience:
IT Manager, Piaggio Asia
Consultant, KPMG Advisory

Education:
Postgrad cert. Supply Chain and Operation Management
(II Sole 24 Ore Business School)
Msc Business Intelligence and Knowledge Management
Msc Computer Science
(University of Verona)

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CEO
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Experience:
VP Finance, TIS innovation park
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Education:
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(Cambridge Judge Business School)
MEng Business Engineering
BEng Computer Engineering
(Politecnico di Milano)

Robert Stachurski
Managing Partner CEE

Experience:
Project Manager, myPhone
Sales Specialist, Samsung
Sales Specialist, Sony

Education:
Postgrad cert. Engineering, Advanced Applied Electronics
(Wroclaw University of Technology)
B.eng, Biomedical / Medical Engineering – Electronics

Advisory Board:

Gianfranco Pizzuto
Co-Founder Fisker Karma
US$ 2 bn valuation, raised up to Series D from top-tier investors in Silicon Valley (e.g. Sequoia, KPCB)

Tom Strodtbeck
Former Director NBIA
Worked with 40 incubators worldwide and had over 500 keynote speeches / workshops in the world’s most renowned top conferences
We provide Innovation and Growth consulting services for leaders who aim to design and create the future

- Corporations & SMEs
- Startups & Scaleups
- Accelerators & Incubators
- Higher Education & Research Centers
- Venture Capital & Private Investors
- Consulting Firms & Service Providers
We have been working with 25+ accelerators, incubators and innovation centers in Europe, helping them and their entrepreneurs in a wide range of topics.

We successfully supported 1000+ startups in these programs with on-site activities (mentoring, workshops) as well as online (remote 1-1 mentoring).
Overview: European Tech & Innovation Development

Funding
M&A
IPOs
Steady increase in equity funding

Equity funding is €25B in 2017
- Almost 500% increase from a mere €4.3B raised in 2012.

If tech startup funding keeps increasing at this rate, in another five years funding levels will reach almost €150B
Deal size is on the rise

Investment volume drastically increased, while the number of deals fell by 1.7% to 3398 (2016), so 2017 saw larger deals:

- 26 deals worth €100M or more, a 108% increase over 2016, which had only 13 such deals.
- 51.6% increase in the number of deals between €20M - €100M
- 30% increase in deals between €5M - €20M, and a 7% increase in deals worth €1M - €5M.
Most significant growth: UK, Germany, France & Sweden

2017: UK & Germany led the way in tech funding volumes:

- UK: nearly €4B increase in funding over 2016, despite Brexit
- Germany: tech funding volume reached €4B.

Two major rounds for Delivery Hero amounted to almost €1.1B
Drop in overall number of M&A transactions & exit volume

Compared to previous years, M&A activity was slow in 2017

- Number of exit transactions fell to 610, down from 657 in 2016 and 717 in 2015
- Overall transaction value took a greater dip - mainly due to the fact that few large deals were disclosed
- The number of VC-backed exits decreased by 27% from 296 to 218
However, it is not something of concern because:

A lot of deals are disclosed (disclosure rate: 26%)

There are a lot of big acquisitions in 2016 compared to 2017:

- Acquisition of the UK's ARM Group by SoftBank in 2016 for €28.8B accounted for 25% of total exit volume that year.
- Largest deal for 2017 was Intel's acquisition of Mobileye for €13.4B, followed by Delivery Hero’s IPO for €4.5B.
Sweden & Germany lead in the number of exits

Sweden showed the most exit activity in 2017 with 120 deals - up from just 55 in 2016.

Germany came in second for number of exits with 112, up from 108 in 2016, with 45 VC-backed deals.

- Greatest exit volume with the acquisition of telecom company Drillisch, and major IPOs for Delivery Hero and HelloFresh.
A record year for IPOs

There were 36 IPOs in 2017, up from 26 in 2016 and 32 in 2015.
IPOs comprised over €8 billion of total exit volume in 2017.

The US remains top acquirer:
- US-based companies continued to be the main acquirers of their overseas counterparts, accounting for 28.23% of the region’s total acquisitions.
- However, in most countries, the majority of acquisitions are by other companies within the same country.
- The US may lose ground to Asian firms as they continue to invest heavily in European tech startups.
Timeline: Europe's top IPOs

2016

- Parques Reunidos Servicios Centrales SA (Spain) - €600M
- Philips Lighting NV (Netherlands) - €750M
- MONETA Money Bank as (Prague) - €656M
- Philips Lighting NV (Netherlands) - €750M
- ENAV SpA (Italy) - €759M
- Dong Energy A/S (Denmark) - €2.301B
- ASR Nederland (Netherlands) - €1.018B
- innogy (Germany) - €4.545B

2017

- ConvaTec Group (London) - €1.667B
- Allied Irish Banks plc (Ireland) - €3.837B
- ASR Nederland (Netherlands) - €1.018B
- Pirelli & C SpA (Italy) - €2.614B
- ALD SA (France) - €1.238B
- BAWAG Group AG (Austria) - €1.975B
- Play Communications SA (Poland) - €1.054B
- EN+ Group plc (Russia) - €1.5B
- ASR Nederland (Netherlands) - €1.018B
Factors for Development

Government
Talent
Community
Startup-friendly regulations & initiatives

(Europe) Fintech: Payment Services Directive (PSD2):
- Forces European banks to give access to raw account data through APIs and allows third-party vendors to initiate payments for customers

(UK) £2.5B Patient Capital Fund & Startup Visa
Take more advantages of levers

Competition for talent has driven up costs ⇒ Many founders decide to stay locally or build distributed teams

Therefore, city authorities continue to take advantage of their levers:

- Denmark: calibrates its tax legislation, linked to its green energy policies
- London: Startup Visa
- Paris: makes their city accessible and feasible to tech development
Strong pipeline of world-class talent

Home to ½ of top 10 computer science institutions in the world

A leading source of doctoral-level technical talent:

- Number of PhDs in STEM-subject graduates from European universities = 2x those from the USA
Big pool of commercial-minded talent

1 in 5 graduates of MBA programmes from Europe's leading business schools are entering tech industry

Source: Business School MBA Graduate Employment Reports
Growing and highly-engaged tech communities

Europe's tech community enjoys access to plenty of events:

- 172 tech-related events daily on Meetup’s platform
- These communities are highly active
20 Impactful European Tech ecosystems
European Tech Ecosystem Rankings used:
- European Digital City Index 2016: describes how well different European cities support digital entrepreneurship.
- Startup Blink: ranks more than 125 countries and 950 cities according to their startup ecosystem strength

List of 25 most impactful European ecosystems:

|-----------------------|-------------------|--------------|--------------|-------------|
Overview

1. Every major city has its own startup ecosystem (1000 ecosystems in Europe)
2. Common market gives tech and innovation businesses the ease of labour and founding companies everywhere within the EU
3. Small ecosystems tend to famous for a small amount of sectors, while big and established ecosystems have a variety of sectors within it
4. All of them develop as a community, and receive support from various stakeholders
5. Distinctive features of each city/country gives each ecosystem its own strengths but also poses some challenges
6. Deep tech continues to thrive in many ecosystems
Deep tech

Total venture capital investments hit $127B last year, with 50% related to software development.

Steep increase in Deep Tech investment from €0.4 billion to €2.3 billion between 2012 and 2016.

Reasons: Europe has all the elements to foster Deep Tech success:

- Academic institutions and universities
- Availability of scientific facilities, resources and services
- Direct access to a large market
- Existence of industries in which the products and services can be deployed
Crypto Valley

Location: Zug, Switzerland
Specialization: Crypto/Blockchain
### Overview

**History & Milestones:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Zug became the first city on the world to accept bitcoin payments for tax purposes</td>
</tr>
<tr>
<td>2017</td>
<td>Crypto Valley announced it is launching a decentralized ethereum-based digital ID system</td>
</tr>
<tr>
<td>2018</td>
<td>Zug successfully completed its first test of a local blockchain-based voting system</td>
</tr>
</tbody>
</table>
Infrastructure & Projects

Crypto Valley Conference on Blockchain Technology 2018:

- Purpose: Bring together leading researchers, entrepreneurs, startups and established companies - share & discuss developments in the Blockchain Technology ecosystem
- 650 attendees, 40 business speakers, 30,000 blockchain challenges and 20 satellite events

Blockchain Summit 2017:

- Small talk and panel discussion related to blockchain
- 800 attendees all over the world, 60 speakers on the main stage and 30 startups presented their projects in the Startup Hall

5 Picks from Us: Crypto Valley
Successful Startups/Scaleups

**Ethereum:**
- A blockchain-based platform supporting self-executing contracts
- Reached market capitalisation of around $1B after pre-sale
- During its 42 days of ICO, Ethereum raised $18M - the most funded ICO at the time

**Advanon:**
- Online platform allowing SMEs to finance their open invoices directly through investors (average 5 minutes)
- Wide investor base (450 investors)
- Prizes: VentureKick I, II & III, Working Capital Award (Swiss Bank Postfinance) and top 4 Fintech Startups in Switzerland

**5 Picks from Us: Crypto Valley**
### Stakeholders

<table>
<thead>
<tr>
<th>Education Bodies</th>
<th>Institutions</th>
<th>Accelerators/Incubators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lucerne University of Applied Sciences and Arts</strong></td>
<td><strong>Crypto Valley Association:</strong></td>
<td><strong>Blockchain Valley Ventures:</strong></td>
</tr>
<tr>
<td>● The Department of Computer Science cooperates with many Blockchain companies and organizations</td>
<td>● Purpose: Build the world's leading ecosystem for blockchain and cryptography</td>
<td>● An accelerator &amp; venture capital firm offering investment, financing and advisory services for blockchain-enabled businesses</td>
</tr>
<tr>
<td>● Researchers support companies in R&amp;D process by Blockchain</td>
<td>● Work:</td>
<td><strong>Waves Lab:</strong></td>
</tr>
<tr>
<td></td>
<td>- Support startups and established businesses</td>
<td>● A blockchain tech incubator, providing support for pre-ICO projects</td>
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<td></td>
<td>- Host industry events</td>
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<tr>
<td></td>
<td>- Connect Crypto Valley with other international centers of blockchain innovation</td>
<td></td>
</tr>
</tbody>
</table>
Silicon Roundabout

Location: London, UK
Specialization: Fintech
Overview

Ranking:

● #3 worldwide and #1 in Europe in Startup Ecosystem Rankings by Startup Blink

● #1 in European Digital City Index 2016

History & Milestones:

● 11/2010: Former PM David Cameron planned to help accelerate the growth of the cluster in speech given in East London
## Infrastructure & Projects

<table>
<thead>
<tr>
<th>Campus London:</th>
<th>IdeaLondon Campus London:</th>
<th>London Tech Week:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Google's free space for London's startup community</td>
<td>● Post-accelerator center for startups &amp; entrepreneurs</td>
<td>● 5 days, 40,000 attendees from 70 countries</td>
</tr>
<tr>
<td>● Campus Residency</td>
<td></td>
<td>● Learn &amp; showcase every imaginable tech</td>
</tr>
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<tr>
<th>Wework Old Street:</th>
<th>Second Home Spitalfields:</th>
<th>Hardware Pioneers</th>
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<tbody>
<tr>
<td>● Home to entrepreneurs working on early-stage ideas &amp; established businesses to expand</td>
<td>● Connected community from: charities, corporates, creative businesses and innovators</td>
<td>● Hosts free monthly meetups featuring guest speakers in IoT &amp; gives feedbacks for startups</td>
</tr>
</tbody>
</table>
### Successful Startups/Scaleups

<table>
<thead>
<tr>
<th>TransferWise</th>
<th>Revolut</th>
<th>Funding Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Specializes on money transfer service</td>
<td>- Digital banking alternative, including pre-paid debit card, currency exchange and peer-to-peer payments</td>
<td>- A P2P lending marketplace</td>
</tr>
<tr>
<td>- Valued at $1B after 4-year launching</td>
<td>- 2M customers in Europe</td>
<td>- Raised $413.2M from investors (Accel, Rocket Internet, Index Ventures, Baillie Gifford)</td>
</tr>
<tr>
<td>- Has attracted investment from Silicon</td>
<td>- Has just raised a Series C investment round of $250M and is now valued at $1.7B</td>
<td>- 2018: Raised $395.85M in a London IPO and is valued at $2.64B</td>
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#### 5 Picks from Us: Silicon Roundabout

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- 2018: Raised $395.85M in a London IPO and is valued at $2.64B
Stakeholders: Education

Science and Enterprise Park
Loughborough University & University College London

- Home to 75 organisations (2,000 people) from high-tech startups to R&D division of global companies

Accelerator London
London Metropolitan University

- Provides support, advice, networks and resources for startups
- Programs: Launchpad, The Big Idea Challenge, 1-2-1 Business Advice

5 Picks from Us: Silicon Roundabout
Stakeholders: Education

Imperial White City Incubator
*Imperial College London*

- Hub for innovation & entrepreneurship, providing office, lab space & support for early-stage company

The Hatchery
*University College London*

- Free space for startups & new enterprises
- Business support & mentoring from business advisors
- Access to programs & events
Stakeholders: Institutions

**Innovation Warehouse**

*City of London Corporation*

- Founded in 2010 as a community for digital high-growth startups in London
- Everyday, 200 entrepreneurs, angels and mentors work together in the coworking space

**Tech City Investment Organisation**

- Attracts inward investment, and support companies in the cluster to expand into international markets
Stakeholders: Accelerators / Incubators / Investors

<table>
<thead>
<tr>
<th>Seedcamp (SC):</th>
<th>RocketSpace:</th>
<th>Entrepreneur First:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Early-stage &amp; micro-seed funding to 650 entrepreneurs from 150 startups</td>
<td>● Supports scaleups with industry-focused expertise and partnership opportunities</td>
<td>● Pre-team stage incubator</td>
</tr>
<tr>
<td>● Since 8/2017: SC-backed companies raised $900M</td>
<td></td>
<td>● Invests in creative &amp; ambitious IT graduates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 6-month programme</td>
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<table>
<thead>
<tr>
<th>Startupbootcamp:</th>
<th>Techstars:</th>
<th>JLAB:</th>
</tr>
</thead>
<tbody>
<tr>
<td>● 3-month accelerated development program to early-stage insurance &amp; financial startups</td>
<td>● Supported 1,024 companies (raised $3.8B)</td>
<td>● Platform for startups (retail, healthcare, IoT &amp; supply chain)</td>
</tr>
<tr>
<td>● Since 2010, invested in 450 startups (€240m)</td>
<td>● Global network of mentors &amp; corporate partners, 3 months of office space &amp; 400 other perks</td>
<td>● 12-week program - then access to capital investment of John Lewis Partnership</td>
</tr>
</tbody>
</table>
Helsinki

Location: Finland
Specialization: Gaming, AI, Health & Life Sciences
Overview

**Ranking:** #62 worldwide and #18 in Europe in Startup Ecosystem Rankings by Startup Blink

**Satellite area: Turku**

- 30 game companies, 3 higher education institutions (programming-focused degree in game development) and Turku Arts Academy (#2 in the world)
- Active game developers' community by Turku Science Park, Turku Game Lab and SparkUp accelerator

5 Picks from Us: Helsinki
Infrastructure & Projects

- **2017**: 2,600 startups, 1,600 investors and 600 journalists from 130 countries
- **Past 7 years**: Has grown from 300-person gathering to a global community organizing 75 events with 40,000 attendees
- Global community events in Helsinki, Tokyo, Shanghai and Singapore, and expanding more

- A part of the biggest hackathon in Europe
- **Impressive numbers**: 6,000 community members, 1,800 selected participants, 50 challenges, 200 solutions, 100 industry partners, 200 mentors, 50 volunteers and 20 organizers
Infrastructure & Projects

**Microsoft Flux:**
- Finnish startup community
- Gives startups access to free network, high tech devices, coaches and networking events

**Turku Game Lab (University of Turku x Turku University of Applied Sciences):**
- Joint working environment, providing services in game education & development, using latest technical advancements

**Oulu Game Lab (university of Applied Sciences):**
- Unique Training & Development Program tailored to the gaming industry
- Supports development of Game prototypes/products and startups
**Successful Startups/Scaleups**

**A mobile gaming company**

- **2010:** Received $5.8M investment from Tekes
- **2016:** acquired by Tencent (total value: $9.26B)

**A genetic diagnostics company**

- **2017:** Received $16.28M - 4 investor groups
- **Work with 450 hospitals - 40 countries**

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**5 Picks from Us: Helsinki**
Stakeholders: Education

Aalto Startup Center (*Aalto University*):
- Runs a 1-2-year Business Generator Program for startups in Espoo, Finland
- Provides early-stage startups with advice, coaching, communal workspaces and networking and fundraising opportunities

Hanken Business Lab (*Hanken School of Economics*):
- A new form of incubator to help startups, scale-ups and NPOs & individuals to achieve significant growth

StartUp School (*Haaga-Helia University of Applied Sciences*):
- Offers courses for students interested in entrepreneurship & supports students who already have businesses
Stakeholders: Institutions

EIT's Knowledge and Innovation Communities:

- Partnerships between businesses, research centers and universities
- Focuses on climate change, healthy living & active ageing

Helsinki Business Hub:

- Enables foreign companies to establish their businesses & innovation-driven companies to grow Helsinki region
- Designs growth opportunities free of charge and based on full confidentiality

Finnvera:

- Provides funding for startups and supports in growth, internationalization and protection against export risks

Business Finland:

- Enables companies to grow internationally

NewCo Helsinki:

- Supports entrepreneurs in the beginning of their businesses & when they are seeking growth
Stakeholders: Accelerators / Incubators / Investors

**Vendep Startup Accelerator:** provides funding, refine business models and help startups acquire customers

**NewCo Helsinki Accelerator:** Growth support - 1-to-1 business advisory program

**Startup Journey:** 10-week program for teams - offers coaching
Stakeholders: Accelerators / Incubators / Investors

**Vertical Accelerator:** the first Nordic digital health & wellness startup accelerator (4-month program x 2/year) - access to 200 world class mentors

**Kaira Accelerator:** Founded by Avanto Ventures. Connects startups with top experts in the field & helps embrace AI by building actual business cases & by developing startups' competence
Silicon Allee

Location: Berlin, Germany
Specialization: Fintech, IoT, Health & Life Sciences
Overview

History & Milestones:

- Began in 2011 as a monthly meetup for startups to connect and share ideas
- 2016: Joined Factory to build a space in central Berlin for the city's startup community to work, live, connect and grow
- Mission: to be the best place to experience Berlin tech scene & to provide Berlin startups with the resources and networks to gain meaningful international exposure

5 Picks from Us: Silicon Allee
Infrastructure & Projects

**Silicon Allee Campus:**

7,500m² complex with S-XL offices, apartments, cafe, craft beer bar, event spaces and other hidden gems

**Factory Berlin Görlitzer Park:**

- Home to a thriving community
- 14,000m², 5 floors and can accommodate 1,000 members
Successful Startups/Scaleups

N26:
- A mobile bank
- Grew from 500,000 to 1M customers in Europe in 9 months
- Generates $1.17B in transaction volume every month
- Plans to have 5M users by 2020

Relayr:
- Rapidly-growing IoT company, providing enterprise middleware & IoT solutions for digital transformation of industries
- Completed 3 series funding rounds, raising £50M
Stakeholders: Education

HU’s start-up service: Support development of business ideas & show possibilities for implementation for university startups

Business Plan Competition Berlin-Brandenburg: Supports businesses in business plan evaluation - 3 phrases of competition (€50,000 prize)

EXIST Gründerstipendium: promotes startups with €143,000 for one year for livelihood, material expenditure and coaching

Berlin Startup Scholarship: 2-4 founders are funded/startup project, and fellows receive €2,000/month (6 months) + infrastructure access
Stakeholders: Education

- **Profund Innovation**: supports finding appropriate financing options & aid programs
- **EXIST-Forschungstransfer**: Provides aid to outstanding research-based startup projects (expensive & high-risk ones)
- **Research to Market Challenge**: Competition for research-based product & business ideas (€9,000 prize)
- **EXIST-Gründerstipendium**: supports students, graduates, researchers that are not affiliated with academia to implement startup ideas
Stakeholders: Institutions

German Startups Association:
- Builds bridges between global startup hubs, nations and continents
- Undertake research and foster international exchange (startup tours to New York, Tel Aviv and Silicon Valley)

Humboldt-Innovation GmbH:
- Wholly-owned subsidiary, and knowledge and technology transfer office of Humboldt-Universität zu Berlin
- Acts as a liaison between university and industries
# Stakeholders: Accelerators / Incubators / Investors

<table>
<thead>
<tr>
<th><strong>Berlin Startup Academy:</strong></th>
<th><strong>Rocket Internet:</strong></th>
</tr>
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<tbody>
<tr>
<td>● 120 of Berlin's most experienced CEOs &amp; investors</td>
<td>● Leverage proprietary processes to build market-leading companies from scratch</td>
</tr>
<tr>
<td>● Helps to turn an idea to a startup &amp; brings entrepreneurial drive to the enterprise</td>
<td>● Incubates 100 companies on 6 continents - total valuation: $34,88B</td>
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<tr>
<th><strong>Plug and Play Tech Center:</strong></th>
<th><strong>hubraum:</strong></th>
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</thead>
<tbody>
<tr>
<td>● A network startup accelerator &amp; corporate innovation platform</td>
<td>● Tech incubator of Deutsche Telekom</td>
</tr>
<tr>
<td>● Runs 2 programs/year in each industry &amp; location</td>
<td>● Brings early-stage startups and leading European telco together</td>
</tr>
<tr>
<td>● 220 corporate partners &amp; 200 VCs</td>
<td>● Since 2012: Connects with its digital ecosystem in Krakow and Tel Aviv</td>
</tr>
</tbody>
</table>
Location: Eindhoven-Leuven-Aachen (NL-BE-DE)
Specialization: High Tech Systems, Health & Life Sciences
Overview

Ranking:

● Leuven: 1 of the 12 most innovative European cities (nominated by European Commission)

● Eindhoven: Highest density of patent applications in the world (Forbes)

History & Milestones:

● The area in which TTR-ELAt is located: long history of cross-border policy efforts (since 1970s)

● 2009: The TTR-ELAt was launched as the merger of 2 initiatives - TTR and ELAt
  ○ 2004: TTR was established in recognition of the role of SE Netherlands for technology-led growth, and subsequently enlarged through collaboration with neighbouring countries
  ○ 2004: ELAt was an initiative of mayors from 3 cities. Soon joined by local & regional actors
Infrastructure & Projects

**Top Technology Cluster**
- A joint cross-border initiative to support technology-oriented companies, especially SMEs, in finding the right partners & establishing sustainable cooperation between companies across borders

**Cross-border Cluster Stimulation**
- Grants for cross-border R&D projects involving SMEs ($5.46M innovation fund)
- $116,000 - $290,000/project
- Result: 3 calls for proposals with 22 cross-border R&D projects selected ($15.33M invested)

**Aachener Innovations Platform**
- An open networking conference (RWTH Technology & Innovation Management Institute)
- Discuss upcoming ideas & trends in innovation, R&D & new technologies in established companies
Successful Startups/Scaleups

- Leuven-based biomedical company - innovative local treatments for damaged & osteoarthritic joints
- Valued $192M at IPO and later acquired by Takeda Pharmaceutical for €520M

- Display manufacturing company, developing electro-wetting displays in the Netherlands
- Raised a total of $45M in funding (4 rounds) & acquired by Amazon in 2013

- VIB scientists Leuven & researchers from UGent - revealed a non-coding RNA gene called SAMMSON
- Paved the way for improved diagnostic tools & skin cancer treatment
### Stakeholders: Education

<table>
<thead>
<tr>
<th>KU Leuven:</th>
<th>KU Leuven R&amp;D Transfer cell:</th>
</tr>
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<tbody>
<tr>
<td>- Europe's most innovative university (Reuters)</td>
<td>- Facilitates collaborative &amp; contract research &amp; develops science parks and incubators</td>
</tr>
<tr>
<td>- Annual research spending: $422.36M</td>
<td>- Creates 100 high-tech companies (3,000 people employed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eindhoven University of Technology:</th>
<th>RWTH Aachen:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Incubates 30 knowledge-intensive startups every year</td>
<td>- Annual RWTH Aachen Innovation Award</td>
</tr>
<tr>
<td>- 11 knowledge institutes &amp; 54 research facilities</td>
<td>- Industry 4.0 Executive Education - Disruptive Innovation and Intrapreneurship program</td>
</tr>
<tr>
<td></td>
<td>- RWTH Start-Up</td>
</tr>
</tbody>
</table>
Stakeholders: Institutions

**Interuniversity Microelectronics Centre (Leuven):**
- Europe's largest independent research centre in microelectronics
- Is becoming increasingly active in nano-electronics & bio-silicon
- Helps attract talents & creates collaboration opportunities in the region

**Netherlands Organisation for Applied Scientific Research:**
- Offers startups a free day of consulting & 50 hours of subsidized research
- Knowledge transfer programme: especially for SMEs

**AGIT:**
- $AC^2$ Innovation Award Aachen: Appreciation for special social or entrepreneurial achievements.
- $AC^2$ Startup Competition: participants are given useful tips from experts & former entrepreneurs on how to start a business
## Stakeholders: Accelerators / Incubators / Investors

<table>
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<tr>
<th>Ecosystem</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The KU Leuven Innovation and Incubation Centre</td>
<td>● Provides shared facilities, equipment &amp; services to new research-oriented, innovative businesses to enable them to concentrate exclusively on their core activity</td>
</tr>
<tr>
<td>The Leuven Bio-Incubator</td>
<td>● Provides innovative dynamic and stimulating environment in which entrepreneurs and companies in biotechnology can develop their ideas and technologies</td>
</tr>
<tr>
<td>The High Tech Campus in Eindhoven</td>
<td>● The smartest km² in The Netherlands (160 companies and institutes &amp; 11,000 researchers, developers and entrepreneurs)</td>
</tr>
<tr>
<td></td>
<td>● Helps startups accelerate by offering easy access to high-tech facilities and international networks.</td>
</tr>
</tbody>
</table>
Silicon Fen (Cambridge, UK)

#1 in Global innovation ecosystem
1500 technology and life science companies with
annual revenue of $18.4 million
16 unicorns
350 patent applications per 100,000 residents

Specialization:
- Software
- Biotech
### Institutions

| MRC Laboratory of Molecular Biology | In 2013, raised $4M in equity funding and $17.5M in a series B investment round | Raised a total of $220M from well-known names like the Wellcome Trust, the Gates Foundation, and Woodford |

Pioneered techniques: DNA sequencing, methods for determining 3D structure of proteins & development of monoclonal antibodies

### Startup

- An event that inspires and supports young leaders to ensure sustainability and growth of the biotechnology industry.
- Flagship event - GapSummit: attracts 100 future bio-leaders and world leaders from the biotech and pharmaceutical industry.
Bristol (UK)

#13 in European Digital City Index 2016
#1 in UK Smart Cities Index 2017
UK’s first ever European Green Capital in 2015
UK’s fastest growing tech region with 65% growth in new digital companies between 2010-2013

Specialization:
- Robotics
The most comprehensive academic centre for multi-disciplinary robotics research in the UK.

Home to over 200 academics, researchers and industry practitioners

Creates affordable 3D-printed bionic hands for amputees and researchers

In 2018, raised $2.9M, including a $571,000 seed round.

In 2017, closed a $7.5M Series A investment

Entered into a retail agreement with Apple

Towards Autonomous Robotic Systems event

The largest robotics conference in UK, bringing together the latest research and applications in autonomous robotics.

4 keynote speakers are from Bristol Robotics Laboratory
Hamburg (Germany)

#20 in European Digital City Index 2016
500 innovative digital startups in 2014
IT industry generates about $4.5 billion every year

Specialization:
- Gaming
- Adtech
- E-commerce
<table>
<thead>
<tr>
<th><strong>next media accelerator</strong></th>
<th><strong>NCA</strong></th>
<th><strong>InnoGames</strong></th>
<th><strong>ABOUT YOU</strong></th>
</tr>
</thead>
</table>
| ● A six months acceleration programme for start-ups active in areas related to media, such as content for media, advertising or services.  
● Intensive training and counselling, support by mentors and investors (of the accelerator).  
● Investment of up to $57,700 | ● A six month programme for startups to work with mentors on scalable business models in the field of e-commerce, e.g. Software Services, Marketplaces and Platforms.  
● Investment of up to $57,700 | ● One of the biggest developers and publishers of browser games globally.  
● Has almost 50M registered users across 3 successful game titles: Tribal Wars, The West, and Grepolis.  
● In 2017, raised a total of $104M in funding over 2 round and was acquired by Modern Times Group | ● One of the fastest growing eCommerce companies in Europe.  
● Raised a total of $300M in funding over 2 round  
Won several awards |
Insurtech Hub (Munich, Germany)

18 accelerators/incubators
50 venture and private equity companies
24 universities
16 R&D institutes

Specialization: Insurtech
German Insurance Academy
- Develops joint training courses for employees of the insurance industry
- Offers "Innovation in Insurance" university certificate series, which consists of five two-day face-to-face seminars and two online courses serving digital innovation in the insurance industry

W1 Forward Accelerator Program
- Access to up to 60 mentors, 13 insurance partners and further InsurTech Hub supporters
- The total funding value per start-up is $57,700

FinanzChef24
- Online comparison site offering insurance solutions to small and medium enterprises as well as business owners

Digital Insurance Agenda
- The world’s largest conference for digital start-ups in the InsurTech sector
Bavaria (Germany)

350 companies in the field of life science
15% of German biotechnology firms
30% of the nation’s biotechnological development of drugs

Specialization:
- Biotech and life science
- Automation
Manages a broad range of training sessions, events and network meetings
Support more than 200 start-up companies in 20 years.

Focus on automotive technology and urban mobility.
Provides office space and supports in manufacturing of a prototype, and access to skills through BMW's innovation centres.

One of the world's top ten biotech hubs.
Offer both space and an extensive network to startups with a focus on medical biotechnology.

Saves laboratories up to 80 hours per week and reduces the error rate by 70%
Won the 2018 Munich Startup Award and was granted $5,700

Supported by the European Space Agency (ESA),
More than 35 world-class engineers, designers and pioneers
Raised a total of $101.4M in funding over 2 rounds
Stuttgart (Germany)

Score 51.9/60 in Urban Mobility Index (global average is 43.9)
#12 of 84 worldwide in Urban Mobility Index
Top 2 global best car sharing performance

Specialization

- Mobility and automation
Stakeholders

**University of Stuttgart, Germany**

The Institute of Human Factors and Technology Management IAT:

+ Built a visualization platform that emphasizes mobility processes and convenience in Stuttgart, thereby supporting mobility experiments in the reality lab.
+ Designed smartphone app for collecting mobility data.

**M.TECH ACCELERATOR**

+ Industry Focus: engineering and mobility.
+ Offers co-working spaces and a holistic support program, which includes individualised consulting components, personal mentoring through a Mobility Board of professionals and industry experts from Stuttgart region companies.

**Moovel - An urban mobility startup**

Used by 5 million people – an increase of 71%, adding 2 million users from 2017 to 2018

**blickshift**

Blickshift provides solutions and products for the analysis of car drivers' behavior
Paris (France)

#10 worldwide and #3 in Europe in Startup Ecosystem Rankings by Startup Blink
#5 in European Digital City Index 2016
Named European Capital of Innovation in 2017
#16 in the Global Innovation Index 2018
#2 in CRBE's European Tech Cities Report in 2016

Specialization:
- Fintech
- Edtech
- Healthtech
## 20 Other Ecosystems: Paris

**Institutions**

- **PARIS&CO**
  - An economic development agency in charge of economic attractiveness, incubation & experimentation
  - Created the Incubator and opened La Fabrique - a FabLab - dedicated to technological innovation

- **CentraleSupélec**

**Incubators/Accelerators**

- **Microsoft Ventures**
  - A 3-month program aims at helping startups build their products and strengthen their businesses

- **Startup Garage Paris from facebook**
  - A six-month-long programme for data-driven startups

**Projects**

- **STATION F**
  - The world's largest startup campus with 35,000-square-meter
  - The campus includes 3000 desks in the startup zone and 26 international startup programs

**Startups/Scaleups**

- **lendix**
  - An online marketplace for business loans, enabling investors to lend money directly to SMEs
  - Uses AI to find patterns in billions of computer mouse movements, helping businesses understand customers behavior
French Tech Bordeaux (France)

#43 in European Digital City Index 2016

A record company creation rate at 16.9% for the last few years (number of companies created/number of companies) while the French average peaked at 12.5% in 2015

Specialization:
- Mobile Application
- Healthcare
- 3D Technology
<table>
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<tr>
<th>Institutions</th>
<th>Projects</th>
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<td>An agency promoting inward investment to Bordeaux and the Gironde, commissioned by the main public partners</td>
<td></td>
</tr>
<tr>
<td>Supports the creation and development of growth companies in the Bordeaux region</td>
<td>The Digital Week is the opportunity to mobilize, value and network with the actors who make live digital in Bordeaux, in France and beyond. Consists of many all-public and professional events</td>
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<tr>
<td>Invest in Bordeaux</td>
<td><strong>Institutions</strong></td>
</tr>
<tr>
<td>Bordeaux Entrepreneurs</td>
<td>Supports the creation and development of growth companies in the Bordeaux region</td>
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<td><strong>Startups/Scaleups</strong></td>
</tr>
<tr>
<td>Offers to startups: mentoring, funding up to € 25,000 and an office.</td>
<td>Mobiles Republic specializes in the development of mobile applications based on content aggregation.</td>
</tr>
<tr>
<td>Provides mentoring, networks, co-working space, education, and capital to startups</td>
<td>Developing gut microbiota directed drugs to target obesity and associated cardiometabolic diseases</td>
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<tr>
<td>1Kubator</td>
<td><strong>Startups/Scaleups</strong></td>
</tr>
<tr>
<td>Héméra</td>
<td>Mobiles Republic specializes in the development of mobile applications based on content aggregation.</td>
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<td>Developing gut microbiota directed drugs to target obesity and associated cardiometabolic diseases</td>
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</table>
20 Other Ecosystems: IoT Valley

- Ranks #31 in European Digital City Index
- 3,000 IT workers
- 38,000 tech workers
- Since 2014: **Toulouse**: €229M funding - 83 startups
- **IoT Valley**: 37 startups, 18 partners over 13,000m²

**Specialization**: IoT

**History & Milestones**:
- Created in 2009 by 4 Toulouse entrepreneurs
- Since 3/2015: Developed an ecosystem dedicated to IoT
Sigfox:
- World's leading provider of connectivity for IoT & device-to-cloud communications
- Raised €277M in funding

Innovation Day:
- A day to get inspired, experiment IoT solutions and network in IoT B2B ecosystem

French Tech Toulouse:
- Aim: Federate the collective to the benefits of startups

University of Toulouse:
- Pépite-ECRIN: accompanies students in their business projects

Airbus Bizlab:
- Global aerospace business accelerator - 6-month acceleration program

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20 Other Ecosystems: IoT Valley

Startups/Scaleups

Projects

Stakeholders
Silicon Docks (Dublin, Ireland)

#41 worldwide & #8 Europe in Startup Ecosystem Rankings by Startup Blink
#8 in European Digital City Index 2016

**Specialization:**
- Traveltech
- Fintech

**History:**
- 2011: The name “Silicon Docks” first appeared as the area came back after 2008 economic crisis
Future Finance:
- 2013: launched to fund €50B annual education finance gap
- Lent £65M to students - 105,000 applications

Dublin Tech Summit:
- Europe's fastest growing tech conference
- 10,000 attendees & 200 speakers from 70 countries

University College Dublin:
- 167,177m² of science, engineering & innovation-related facilities
- NovaUCD

Startups/Scaleups
Flender:
- Peer-to-peer lending startup
- 2018: Raised $58B in debt financing round to fund its expansion

Projects
Tech Connect Live:
- Ireland's largest annual business & tech exhibition for Micro, SME and Enterprise companies

Stakeholders
National Digital Research Centre
- A government sponsored accelerator for digital startups
Galway (Ireland)

#2 largest exporter of Medtech products in Europe
1 of top 7 most important Medtech clusters in Europe

Home to a closely knit cluster of 300 Medtech companies

**Specialization:**
- Medtech
Develops CapBuster - a device that treats CTO
2015: Raised $2.56M in funding from AIB Seed Capital Fund

Establishes the BioInnovate Fellowship - a key research hub in the region, reflecting the innovative nature of Galway's Medtech culture

Brings together world's leading business leaders & experts on delivering better health outcomes & new tech
N500 medtech professionals network

Provides innovators with the resources to explore & implement tech solutions to healthcare issues

20 Other Ecosystems: Galway
**Odense (Denmark)**

#2 largest exporter of Medtech products in Europe
1 of top 7 most important Medtech clusters in Europe

Home to a closely knit cluster of 300 Medtech companies

**Specialization:**
- Medtech
<table>
<thead>
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<th>Startups/Scaleups</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blue Ocean Robotics:</strong></td>
<td><strong>Odense Investor Summit:</strong></td>
</tr>
<tr>
<td>● Mission: Bridge academic-based research to business (focus: robotics)</td>
<td>● Annual event gathering capital-seeking companies &amp; investors in 1 of Europe's biggest robotic clusters</td>
</tr>
<tr>
<td>● Raised $8.4M in funding (2 rounds)</td>
<td>● 2018: 130 investors - $46.5M funding</td>
</tr>
<tr>
<td>● Awarded Gazelle 2017 by the Danish newspaper Børsen</td>
<td></td>
</tr>
<tr>
<td><strong>KUBO Robot:</strong></td>
<td><strong>Syddansk Forskerparker:</strong></td>
</tr>
<tr>
<td>● Empowers kids to explore robotics &amp; programming through tangible play</td>
<td>● A business fund aimed at running innovation &amp; research park, and supporting entrepreneurship &amp; knowledge-based industries (e.g: robotics, welfare and design)</td>
</tr>
<tr>
<td>● Raised $1.5M in funding (3 rounds)</td>
<td></td>
</tr>
</tbody>
</table>
StartupDelta (Amsterdam, Netherlands)

#18 worldwide & #7 in Europe in Startup Ecosystem Rankings by Startup Blink
#3 in European Digital City Index 2016

Scores well in terms of ecosystem value - 2,900 startups - $14B (Genome)

Specialization:
- Fintech
- Health & Life Sciences
- Agtech
**Adyen:**
- Founded in 2006: Offers a platform that enables retailers to accept payments from Visa, Mastercard and Amex and some alternatives (Apple, Google and Paypal)
- 2018: IPO - €240/share - valuation: $8.3B

**StartupDelta Summit:**
- Aim: Equip startup ecosystem with access to knowledge and network, so that Dutch startups can start, expand and internationalise faster

**Rockstart:**
- 1 of Europe's first multi-vertical accelerators
- Focus: Digital Health, Smart Energy and AI
- Invested in more than 100 startups (raised $52.32M)
Zurich (Switzerland)

#46 worldwide & #12 in Europe in Startup Ecosystem Rankings by Startup Blink

**Specialization:**

- Crypto/Blockchain
- Genomics
- Quantum Computing
20 Other Ecosystems: Zurich

Startups/Scaleups
- Creates cutting-edge augmented reality tech for automotive industry
- Raised $108M in funding (3 rounds) - Revenue: $3.5M

Projects
- 1 of the largest & most prestigious hackathons in Europe
- 550 international participants selected from 4,800 applications

Institutions
- Non-profit, scientifically backed initiative
- Mission: generate quantitative data and insights on development of Swiss startup scene

Projects
- Annual conference about Cryptofinance, WealthTech and InsurTech
Milan (Italy)

#48 worldwide & #14 in Europe in Startup Ecosystem Rankings by Startup Blink

Hosts more than 20 incubators and accelerator, more than 30 coworking spaces, and over 1000 innovative enterprises

Specialization:
- Agtech/Foodtech
- Artificial Intelligence
- Fintech
- Tourism 2.0
Startups/Scaleups

- Online agricultural delivery marketplace
- Plans to link food e-commerce & mobile commerce
- Annual revenue: $2.31M

Cortilia

- A smart payment platform (Services: pay in affiliated stores, exchange money with friends and saving)
- Raised $50.8M in funding (6 rounds)

satisfy

Projects

- Global Food Innovation Summit
- Since 2015: Has brought brightest minds in food & adtech to Milan for annual gatherings

Global Food Innovation Summit

Incubators

- The Business Incubator of Digital startups, listed on the Italian Stock Exchange

Incubators
Malta

#22 globally in both market reach and talent for Gaming
#1 in Europe for experienced software engineers

Over 300 gaming companies

Specialization:
- Gaming
- Adtech
<table>
<thead>
<tr>
<th>Startups/Scaleups</th>
<th>Projects</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>World's first online casino adventure (players collect things, points and trophies in every round)</td>
<td>Online gaming event, bringing 3 pillars in Gaming industry 12,500 attendees</td>
<td>Founded in 2013 at University of Malta, delivering postgraduate education in games</td>
</tr>
<tr>
<td>Online casino operator Received IGA Online Casino Operator of the Year for 4 years</td>
<td>2018: 80 participants across 13 teams</td>
<td>Malta’s first tech business incubator at University of Malta</td>
</tr>
</tbody>
</table>

20 Other Ecosystems: Malta
Barcelona Tech City (Spain)

#17 worldwide & #6 in Europe in Startup Ecosystem Rankings by Startup Blink
#9 in European Digital City Index 2016

Specialization:
- Gaming
- Health & Life Sciences
- Smart City
Startups/Scaleups

- Machine learning computer vision company, specializing in visual recognition for Real Estate
- Top 5 hottest AI startups (Nvidia)

Helps solve urban mobility problem: make underused parking spaces accessible & reducing time drivers looking for a parking lot

2017: Raised $1,74M

Projects

11,000m² facility, providing space for 1,000 sector employees from 100 startups & companies
Holds 15-20 events every month

- Aims to empower cities & collectivize urban innovation across the globe
- Brings together 700 cities worldwide, 400 speakers & 20,000 attendees
Budapest (Hungary)

Hungary ranks #51 in Global Cybersecurity Commitment Index
Budapest ranks #33 in European Digital City Index

Specialization:
- Cybersecurity

History:
- In 2013, the National Cyber Security Strategy of Hungary was adopted
### Education/Institutions/Infrastructure & Project

- Various lectures in 4 faculties of NKE are related to cyber security
- Set up an academy of cyber security
- Established by Deloitte
- Link with more than 20 global centers in Europe, the Middle East, Africa, Asia-Pacific and the Americas with 1,200 cybersecurity professionals in the EMEA region
- Hosts Cyber Security Month Campaign
- Discusses topics of the most interest from government and market players about cybersecurity

### Startups/Scaleups

- Serves more than 300 merchants, reviewed 25 million transactions and estimated to have saved businesses around $11,58 million.
- Raised $695,000 in investment.
- Adopted by more than 10,000 organisations in 193 countries.
- Raised $4.7 million from Euroventures and private investors.
Stockholm (Sweden)

#2 in Europe Digital City Index
#15 in Global Startup Ecosystem

$4.5B investment in new companies
$1.4B investment in Stockholm-based tech companies

**Specialization:**
- Fintech
- Gaming
- Cleantech
In 2010, increased revenues by over 80% to $54M
In 2018, has more than 60M users
In 2016, company valuation is more than $2B

More than 2M downloads
Possesses Wonderglade, one of the highest rated games on Daydream.
The first investment in Europe by Google Ventures.

Operates on 7 different markets
In 2016, was honoured by the World Wildlife Fund (WWF) as Climate Solver

Bring together the world's leading crypto experts
180 Globally renowned crypto experts & 400 Companies from 19 Countries

20 Other Ecosystems: Stockholm
Tallinn (Estonia)

#7 in blockchain cities

#12 in Global Innovation Index 2018

#18 in European Digital City Index 2016

#50 worldwide and #15 in Europe in Startup Ecosystem

Specialization:

- Blockchain
### Education

**Tallinn University of Technology:**
- Workshop on Blockchains for Inter-Organizational Collaboration
- Innovation and business centre Mektory: 4450m² of space

### Institutions

- Collaborates with Swedbank to accelerate fintech startups
- Up to $34,500 investment, premium access to Swedbank APIs

### Startups/Scaleups

**Bondora**
- Processed more than $460M of loans applications from borrowers
- In 2016, raised $5M from the US-based investment firm Valinor Management

### Projects

- North Europe’s largest cryptocurrency and blockchain conference
- 1000+ attendees and 50 speakers, including IBM, Microsoft, Bitcoin Foundation...
THANK YOU! 谢谢。

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