

Barriers to FinTech innovation in the Netherlands

Research findings – Final draft



FinTech players are disrupting Financial Services – Which barriers need to be overcome to support FinTech in NL and enable innovation?

World Economic Forum



Economist



CEOs

"They all want to eat our lunch."
Jamie Dimon, JP Morgan Chase CEO

"We are on the leading edge of a technology revolution in financial services."
Anthony Jenkins, Barclays CEO

"Banks are losing their monopoly in banking."
"In the future, BBVA will be a software company!"
Francisco González, BBVA CEO

"Fintech 2.0 could mean a "seamless specialization" across core elements of the value chain"
Santander Innoventures

- 1 What is the **current status** of the Dutch FinTech **sector and level of innovation**? Page 5
- 2 What are the **key barriers** to overcome in order to enable FinTech innovation? Page 12
- 3 How can these barriers be overcome to **enable and accelerate innovation** in the Dutch financial market? Page 16

This research is based on a multifaceted methodology: Expert interviews, legal round table, survey and desk research and analysis

Research methodology

I

Extensive expert interviews



- > 20 interviews with a broad range of experts from FinTechs, venture capital funds and banks
- > Key topics: (position of Dutch government towards) financial innovation in NL, rules & regulations, regulatory supervision and FinTech ecosystem

Legal round table

II



- > 15 legal experts on regulation with respect to financial services
- > Focus on proposed amendments to the system of rules and regulation to enable FinTech startups to innovate
 - > Experiences with regulators from a legal perspective

METHODOLOGY

IV

Desk research and analysis



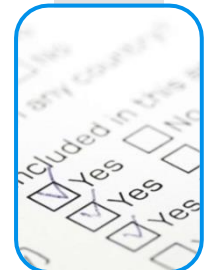
- > Focus on validation and processing of perspectives that were shared during interviews
- > Research on international best practices regarding regulation, government support and FinTech ecosystems
- > Analysis of global trends and investments

- > Questionnaire was sent out to a broad range of startups, bank innovation managers and other innovation experts

- > Focus on experiences with regulators from a business perspective
- > Results have been used as input for the extensive expert interviews

Holland FinTech regulation survey

III



Executive summary

- 1 > FinTech is gaining traction, with key (digital) trends reshaping the Financial Services (FS) industry – the FS value chain will be unbundled, and new financial solutions will be introduced
 - > FinTech is crucial for the Netherlands given the contribution of Financial Services to our GDP (7%)
 - > In particular, FinTech innovations will have a broader impact than just Financial Services and could enable efficiency improvements in other industries – key examples are the healthcare and legal industries

- 2 > Currently the FinTech sector in the Netherlands is hindered by 3 key barriers: gaps in and rigidity of regulation and legal framework, regulatory execution/supervision and collaboration:
 - Current regulation and legal framework do not cater to various new FinTech applications and lack clarity – additionally, regulation is not aligned across Europe; regulation in the Netherlands is among the strictest within Europe (e.g. on dealing with Payments Services Providers)
 - Regulatory supervisory authorities are short on knowledge and coordination, and decisiveness is therefore lacking – however AFM recently created a dedicated FinTech team that will help to improve on current attention points
 - There is room for improved structured (international) collaboration between startups, banks and the government
 > In countries with a robust FinTech sector, governments developed a strong vision for the sector which helped to overcome these barriers – the government have proven their ability to drive successful initiatives as e.g. performed with Pharma

- 3 > The government's priority is to develop a vision of the FinTech sector within the Netherlands – is the ambition to be front-runner and develop a leading FinTech sector or is the ambition to facilitate only and be a follower?
 - > Regardless of which course the government takes, clarification/alignment of regulation on e.g. blockchain is required – a position as a leader requires more competitive regulation, coordinated and cooperative supervision to jointly experiment and support FinTech growth and more and broader collaboration
 - > A joint effort from government, supervisory authorities and market players based on a strong vision can overcome the barriers identified and develop a leading FinTech hub, which can serve as the gateway between London and continental Europe

1. Current status of the sector



Financial Technology (FinTech) is a line of business that uses technology to offer innovative solutions in Financial Services

FinTech: Definition and key examples

What is it?

- > Financial Technology, also known as FinTech, is a line of business that uses technology to offer Financial Services products
- > FinTech companies often build on fully digital operations to deliver their services and have opened up both business-to-business and business-to-customer opportunities
- > The FinTech ecosystem encompasses all companies that engage in financial technological innovation – i.e. it is not only dedicated to startups









Selected examples

- **FinTech offers innovative solutions:**
 - ✓ Cashless payments at a retailer
 - ✓ Peer-to-peer lending platform
 - ✓ Robotic trading
 - ✓ Online credit scoring
 - ✓ Alternative digital currency (Bitcoin)
- **FinTech does not further develop existing (complex) products & services:**
 - ✗ Collateralized debt obligation
 - ✗ Mortgage-backed securities
 - ✗ Credit default swaps



FinTech is crucial for the Netherlands given the contribution of Financial Services to our GDP (7%)

Selection of countries assessed and financial sector characteristics

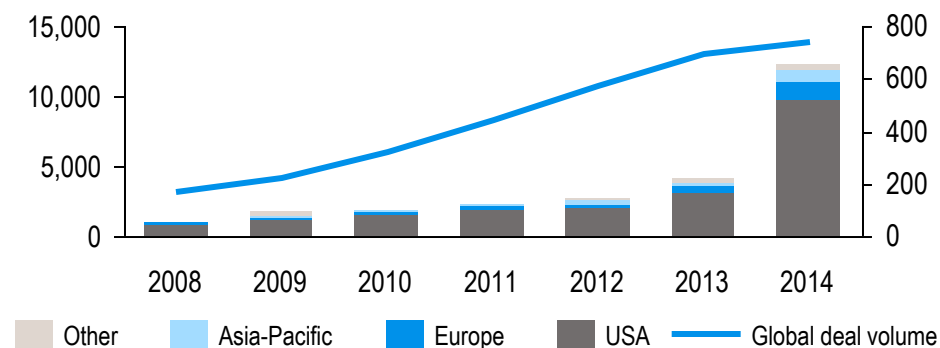
	Added value FS, 2014 [share of GDP]	Banking assets, 2014 [factor of GDP]
 United Kingdom	7.1%	4.4x
 Switzerland	9.5%	5.3x
 Germany	3.7%	2.4x
 Austria	4.1%	3.4x
 Sweden	4.1%	3.9x
 Luxembourg	23.5%	15,1x
 Norway	4.3%	1.7x
 Netherlands	7.0%	3.8x

Increase in global funding activity shows attractiveness of innovative FinTech – European FinTech market currently dominated by UK

Global FinTech funding [USD m]

Global FinTech funding, 2014

Global, 2008-2014 [USD m; # of deals]



Within Europe the **UK and Ireland** accounted for **42% of funding**; the rest of Europe:

Nordics: 23%

Netherlands: 21%, of which USD 250 m (~82%) for Adyen

Germany: 6%

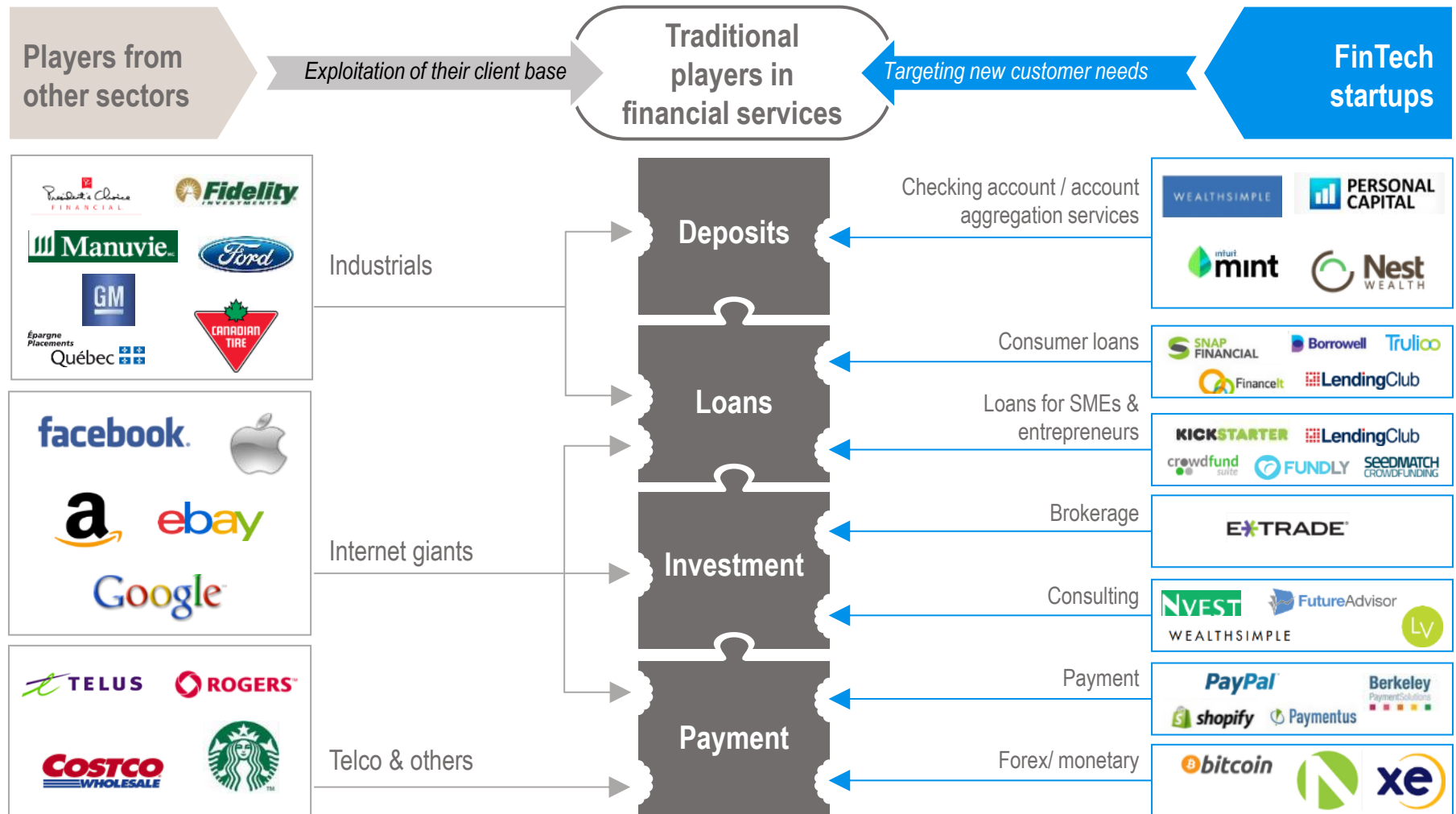
Others: 8%

Major funding raised in Europe¹⁾, 2015

1		Kreditech	Alternative lending	292
2		Funding Circle	P2P lending	150
3		iZettle	Mobile payments	134
4		worldremit	Money transfer services	100
5		TransferWise	Money transfer services	58
6		LendInvest	P2P lending & investing	24
7		BitFury	Bitcoin infrastructure	20
8		currency cloud	Cross-border payments	18

1) Based on USD / EUR = 1.11 (average exchange rate of 2015)

Traditional "all-in-one" banks are today threatened all along the value chain by FinTech startups as well as other sector players




















Key FinTech trends will impact all functionalities and reshape the Financial Services industry

Trends in FinTech and the impact on the Financial Services (FS) sector

Key disruptive trends

Impact on FS sector

<p>Deposits</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><i>Lean, automated processes</i></p> </div> <div style="text-align: center;">  <p><i>Big data</i></p> </div> </div>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Alternative banking channels</p> </div> </div>
<p>Loans</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><i>Peer-to-peer</i></p> </div> <div style="text-align: center;">  <p><i>Alternative adjudication</i></p> </div> <div style="text-align: center;">  <p><i>Social credit scoring</i></p> </div> </div>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Alternative lending</p> <p>Alternative credit scoring</p> <p>Shifting customer preference</p> </div> </div>
<p>Investment</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><i>Social trading</i></p> </div> <div style="text-align: center;">  <p><i>Automated advice & wealth management</i></p> </div> <div style="text-align: center;">  <p><i>Empowered angel investors</i></p> </div> <div style="text-align: center;">  <p><i>Retail Algorithmic</i></p> </div> </div>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Empowered investors</p> <p>Process externalization</p> <p>Crowd funding</p> </div> </div>
<p>Payment</p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><i>Mobile payments</i></p> </div> <div style="text-align: center;">  <p><i>Streamlined payments</i></p> </div> <div style="text-align: center;">  <p><i>Integrated billing</i></p> </div> <div style="text-align: center;">  <p><i>Next gen. security</i></p> </div> </div>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Cashless world</p> <p>Emerging payment rails</p> </div> </div>

FinTech innovations enable efficiency improvements in other industries, such as the blockchain for healthcare and the legal industry

Potential applications of FinTech innovations in other sectors

Healthcare



- > Healthcare is EUR ~100 bn industry; ~20% of expenses are administrative
- > Crowdfunding technology can provide a new and/or additional source of funding for healthcare institutions and potentially create a community around a group of healthcare institutions
- > The current tri-party setup between patient, insurer and healthcare provider results in complex and costly processes
- > FinTech can be used to simplify payment flows in healthcare

Trade and logistics systems



- > Blockchain technology can be used to simplify international transactions and verification of unknown third parties in other countries
- > FinTech can simplify the execution of transactions and result in real-time and straight-through-processing of transactions, facilitating the integration of value chains and more efficient logistics management

Legal, taxes and government



- > Blockchain technology can be used to verify the authenticity of legal documentation, approval processes, agreement management or even digital-identity validation – trusted third parties will not be required anymore
- > Smart contracts are computer programs that can automatically execute terms of a contract, through predefined rules and measures (e.g. in Codius or Ethereum)

Blockchain

- > Blockchain is an **innovative programming system** that allows **contracts** to become fully digital and automatically executed, **validated by technology** rather than a third party like a notary
- > **Blockchain** is a technology that allows one to create a shared record of events and transactions – many believe that blockchain technology could be used to **track and verify almost any digital record**
- > The Bank of England (BoE) launched an initiative to uncover areas in **society and business** for which blockchain technology will have **considerable impact**

2. Key barriers to innovation



Based on research we established a list of key success factors which would enable development and accelerate FinTech innovation

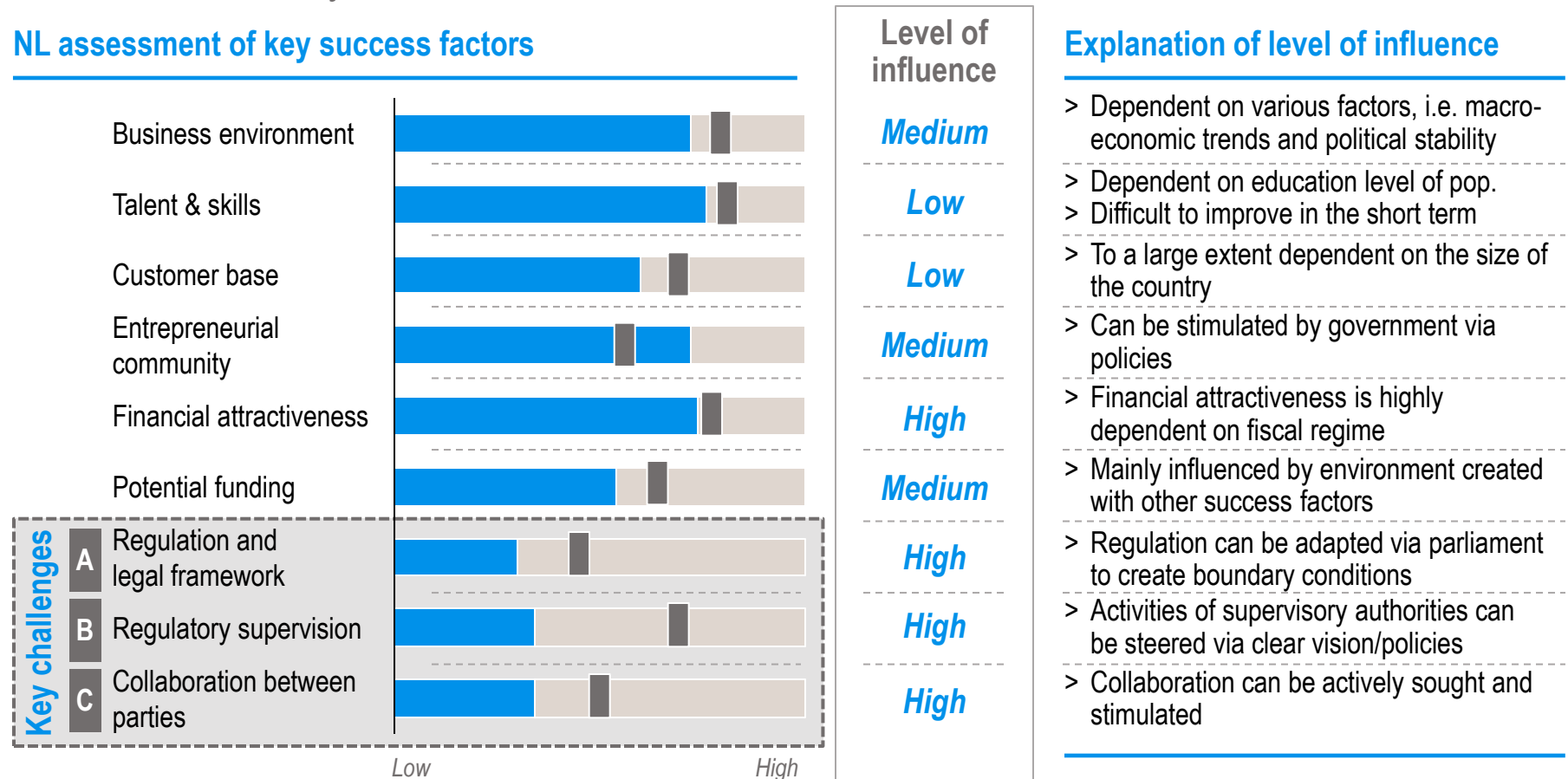
Key succes factors for FinTech



The performance of the Netherlands can be further improved by addressing the key challenges to FinTech

Assessment of key success factors to enable and accelerate innovation

NL assessment of key success factors

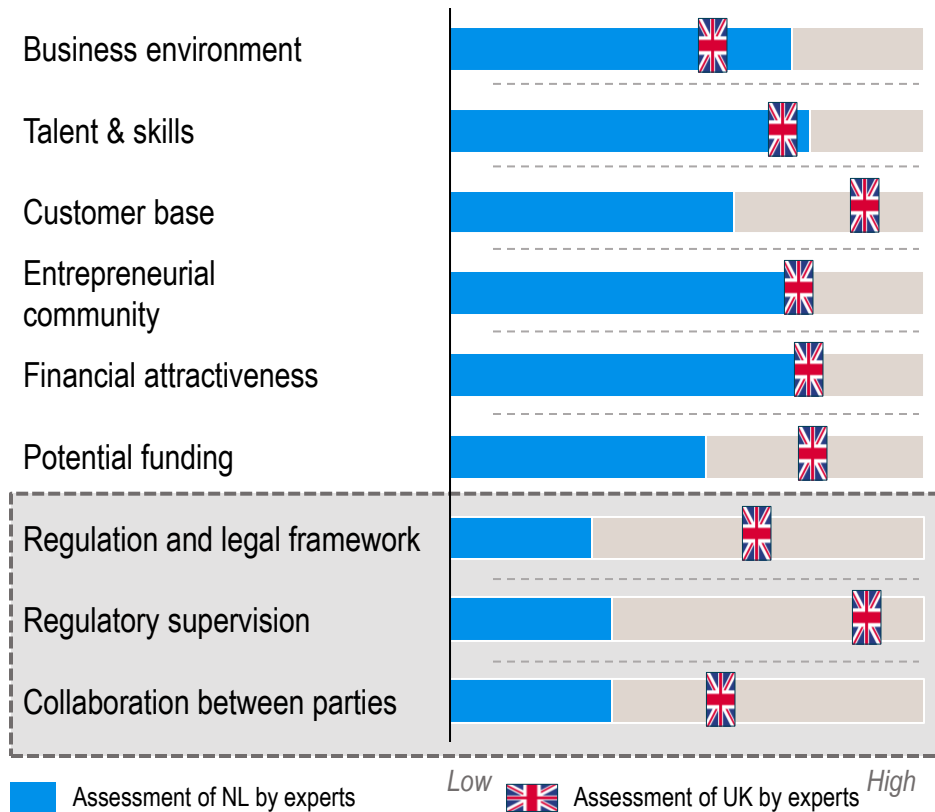


Expert assessment of NL European Benchmark

UK scores well on key success factors, driven by a strong vision on FinTech and its ecosystem

Assessment of key success factors and vision UK

UK assessment of key success factors



FinTech vision in the UK

UK has driven a strong FinTech vision to invest and facilitate innovation...

"The UK will be the **premier location** for starting, growing and retaining innovative financial technology businesses. The UK environment will provide outstanding access to leading **academic talent, investment and facilities** and **promote** global thought leadership on emerging digital solutions. It will provide **unrivalled international connectivity**, a **regulatory environment that balances risk and innovation**, and will foster and maintain the **optimal conditions** for growing businesses."¹⁾

...with 4 policy settings to achieve their goal

- 1 Regulatory restraints as a driver
- 2 Direct subsidies
- 3 Competition laws
- 4 Supportive regulatory environment

1) FinTech statement FinTech Futures, Government office for Science



3. Enable and accelerate innovation



A joint vision has the potential to strengthen the industry – The government has proven its ability to drive successful initiatives

Developing a joint vision

Example of best practice – Dutch "topsector" policy

ACTIONS

1. Agri & Food



VISION

- > Collaboration between **corporations, research institutes and government** (the "Golden Triangle") can positively impact the international competitiveness of Dutch industries and companies

2. Chemicals



3. Creative



4. Energy



5. High tech



6. Horticulture



7. Life sciences and health



8. Logistics



9. Water



POLICY (key pillars)

- > Every topsector comprises a team that develops a **joint vision**
- > In line with that vision, it develops a **joint strategic agenda**, which takes a **holistic approach** and includes:
 - R&D (and innovation), education and labor market, economic diplomacy and internationalization, as well as rules & regulations
- > Important **motives** for developing the policy are to:
 - Replace use of subsidies by fiscal policy, increase use of regular financing for PPPs, decrease fragmentation of innovation policy and involve other parties

IMPACT (example pharma)

- > A good example within the topsector life sciences and health is the founding of **ecosystem** in Oss with focus on bio-pharma – together with a **long list of partners**
- > **Resulted in the biggest biotech acquisition** in the Netherlands – acquisition of 55% for EUR 3.5 bn of Acerta Pharma, one of the first established companies, by AstraZeneca

- > Identify and involve **key stakeholders**
- > Develop a **joint vision** that gives direction to the industry
- > Develop a **joint strategic agenda** that addresses the key challenges for the industry
- > Define list of **key conditions** that are required for successful **implementation** (e.g. regulation)
- > Define **roles and responsibilities** that support in various ways

The Financial Services market has significant social importance in the Netherlands – FinTech ambition needs to be defined

Approaches to FinTech

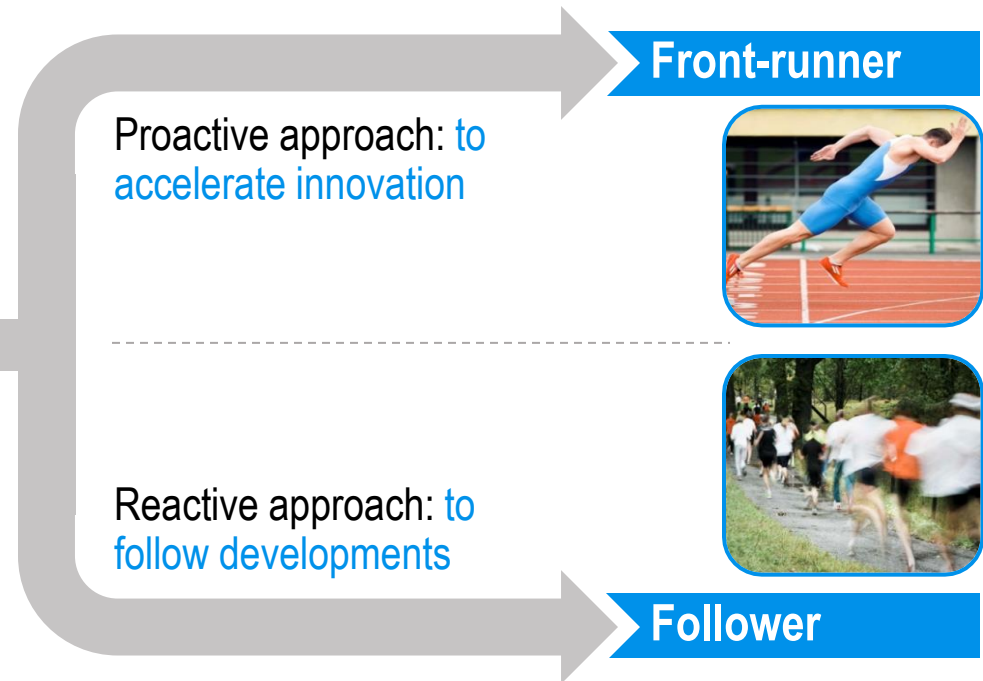
SOCIAL IMPORTANCE

In 2012 the Dutch FS market was the fifth largest in Europe. The market had a 7% share in the Dutch GDP and 258,000 people worked in the FS sector

FS market

FINTECH DEVELOPMENTS

Global investments in FinTech tripled in 2014 to over USD 12 bn with Europe experiencing the highest level of growth



To safeguard a stable and attractive Dutch FS market, a proactive approach is required where FinTech is actively supported

Approaches to FinTech and its impact on the Financial Services market



Follower

Reactive approach to follow developments

- > **Act** upon the FinTech developments when they **become mainstream** and **leverage best practices** of other countries
- > **No active support to FinTech** and **no differentiated**, aligned policies and regulation for FinTech companies

*The Netherlands will have **limited control** on how the Financial Services market will develop – potentially resulting in a **deterioration** of its **large financial sector***



Front-runner

Proactive approach to accelerate innovation

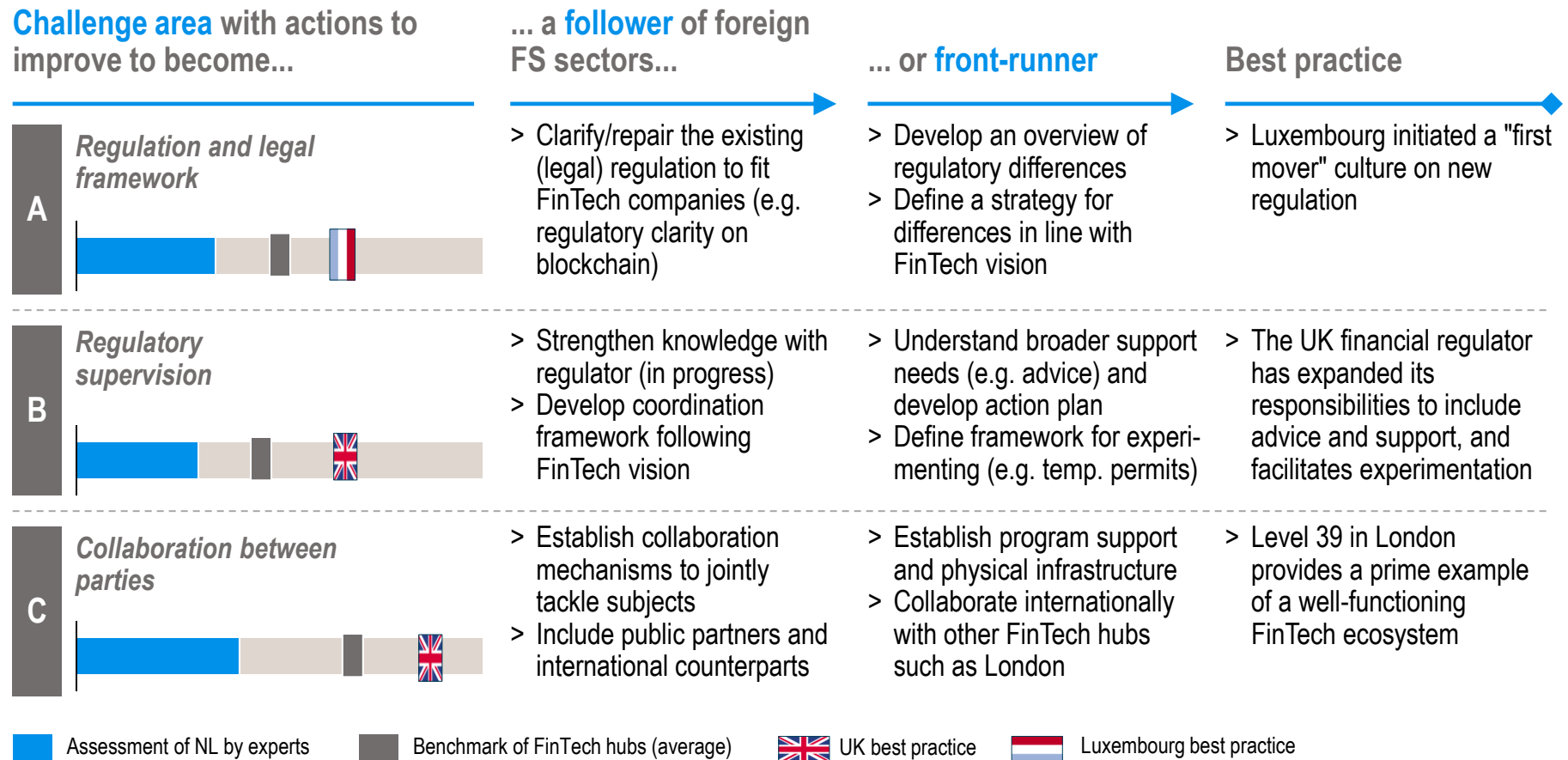
- > **Develop an environment** that enables **FinTech** to **flourish** in the Netherlands – experiment and drive FinTech developments and best practices
- > **Actively support FinTech** with a clear vision and related rules and regulations that **enable a leading European position** – alignment on regulation is actively promoted

Preferred option

*The large Financial Services sector will be **actively supported** with **leading FinTech developments** – **innovation** to further **strengthen the financial sector***

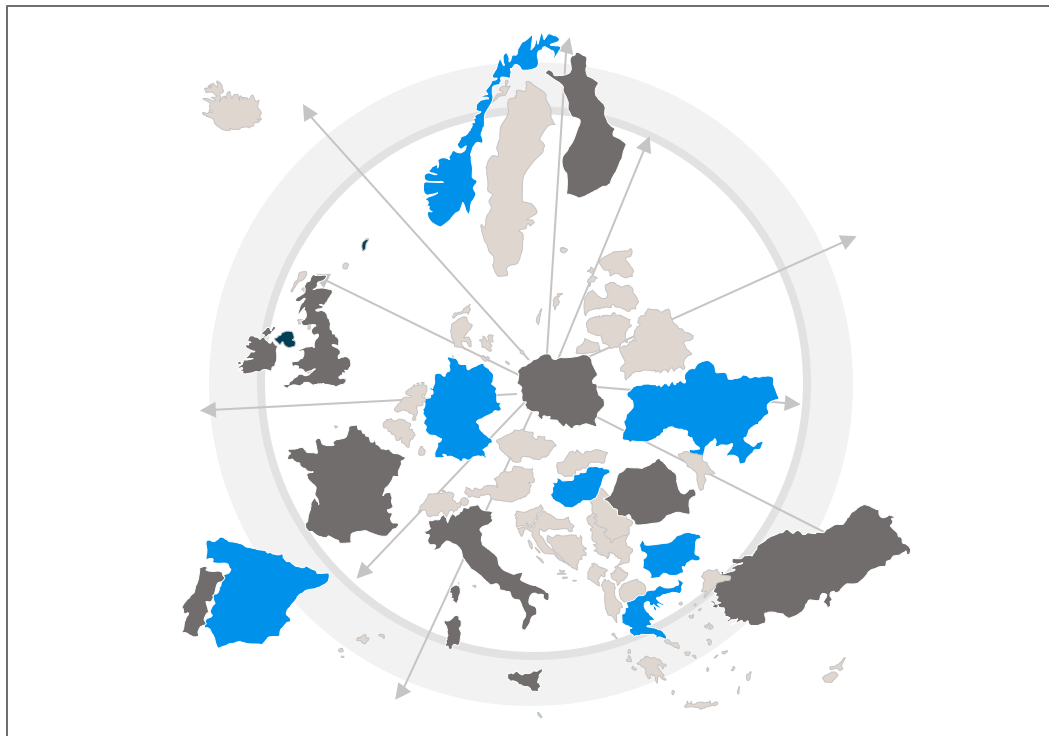
Additional actions per challenge area have been defined – Actions to be implemented depend on ambition level of FinTech vision

Required actions per challenge area



While European economies are interconnected, the regulatory landscape is scattered and disconnected – Alignment is required

European regulatory landscape



- > **Economies are more interconnected** than ever – a trend that is expected to continue
- > There is **disparity** between interconnectedness of economies and alignment of regulation
- > The impact of implementing **national deviations on international/European regulations** and guidelines is limited due to the extent of interconnectedness – it provides a false sense of security
- > Additionally, it results in a non-level playing field and **arbitrage opportunities** as companies can obtain permits in other countries, in order to avoid regulatory requirements, while operating internationally

> Regulation is still strongly dependent on **national implementation of laws**, making a standardized European **proposition** almost impossible

Lack of clarity of legal framework results in unpredictable outcomes or time-consuming decision processes, which hurt the startups

Situation assessment of legal framework: Clarity for FinTech companies

NOT EXHAUSTIVE

Situation assessment – legal issues for FinTech companies

Required actions (follower)

- > FinTech companies and business models may not fit within the **licensing regulations and procedures** of regulatory agencies (e.g. crowdfunding and bitcoin) – the rules were designed with another type of financial institution in mind
- > Non-fit results in ambiguity within decision-making authority and potentially no or inconsistent rulings from supervisor (AFM, DNB)
- > During and after the financial crises most regulatory agencies focused on increasing **capital requirements regulations and taxes** – it is unclear how these regulations should apply to FinTech companies (e.g. bank vs. lending platform)
- > Complex "alphabet soup" of regulations, which is generally unclear, and particularly how it applies to FinTech: Basel III, SEPA, Mifid 2, Solvency 2, IFRS, AMLD, PSD 2

> Clarify issues:

- Regulation for crowdfunding
- Regulation for blockchain technology:
 - How can a virtual coin be qualified as a good in the sense of the "Burgerlijk Wetboek"?
 - How can trading and clearing via Blockchain be realized?
- Is the regulation that is applicable to payment flows also applicable for information on payment flows?
- What is the definition of "opvorderbaar geld"?
- Can FinTech startups access "giraal betalingsverkeer"?
- How does PSD 2 work in practice for FinTech startups?
- General start-up regulation, e.g. how to deal with value added tax and "gebruikelijk loon"

Currently Dutch regulation is more strict than European regulation and therefore makes the Netherlands less attractive to FinTech

Situation assessment of regulation: Attractiveness of the Dutch FS market

NOT EXHAUSTIVE

Regulatory issues for Dutch FS players

- > Although more and more regulation is defined at a European or international level (e.g. SEPA, PSD2, MIFID, Basel), countries can choose to be more strict than the agreed-upon level
- > In some circumstances countries have demanded local exceptions to facilitate the overall approval of the joint regulation (e.g. Prospectus Directive for crowdfunding)
- > As a result the European regulation is often not aligned; and the level of alignment depends on the level of deviations of each country
- > Currently the Dutch regulation is often more strict than European and/or international regulation and therefore makes the Netherlands less attractive compared to other countries, and Dutch companies less competitive internationally (e.g. capital adequacy ratio, fixed to variable pay ratio)

Topics to address (follower)

- > Should **Payment Services Providers** (PSPs) be regulated as **Financial Institutions**, as stipulated by 'Wet financieel toezicht' (Wft)
- > How can (relatively risky) **investments** in early-stage enterprises be **incentivized** (e.g. Seed Enterprise Investment Scheme – UK)

Once a joint vision has been developed, this can be translated into a supporting regulatory agenda

Best practice from Luxembourg regulations

Best practices

- > Luxembourg's **Minister of Finance** has made the **development of the FinTech** sector in Luxembourg one of his **top priorities**
- > Accordingly, Luxembourg initiated a **"first mover" culture** on new regulation (e.g. Luxembourg has **defined Bitcoin as scriptural money** – thereby being the first country to give it **currency status**¹⁾)
- > Providing clarity on regulation attracts companies to set up in Luxembourg
- > Going forward, Luxembourg wants to further develop its financial industry – it has launched LuxembourgForFinance, **the agency mandated with the development** of finance in Luxembourg

Topics to address (front-runner)

- > Develop an exhaustive overview of **regulatory differences (transparency)**
- > Develop a **strategy** for these differences following the **FinTech vision**
- > Consolidate these strategies in a **regulatory agenda** with targets and implementation planning (regulations, support, ecosystem)
- > **Mandate an agency to be responsible for implementation** of this regulatory agenda
- > Introduce issues into the **European regulatory agenda** (use and initiate discussion to create harmonization of policies across Europe)

1) Some countries (USA, Japan) consider bitcoins to be goods as well as financial instruments, while many other countries do not regulate Bitcoin or have even declared Bitcoin illegal

Regulators show willingness to support FinTechs and provide funding – Knowledge development is the first step which AFM is addressing

Assessment of regulator facilitation of FinTech

Situation assessment

Based on interviews with industry experts there is room for improvement in the areas of FinTech knowledge and the advice that regulators provide to FinTech startups

FinTech knowledge



Advisory role for FinTech industry



Regulatory coordination



Willingness to support



FinTech funding



Low

High

Topics to address (follower)

- > Identify **knowledge gap**
- > **Develop plan** to improve knowledge with regulator
- > Develop **coordination framework** following FinTech vision
- > Identify **advising needs** in FinTech sector
- > Develop plan to **address needs**

AFM recently created a dedicated FinTech team that will help to improve on current attention points

The UK financial regulator expanded its responsibilities to advice and support, including innovative solutions like temporary permits

Best practice from regulator facilitation in the UK

Best practice: the Financial Conduct Authority (UK)

- > In October 2014, the FCA initiated "**Project Innovate**" which offers **direct support** to innovative firms that try to launch new products and services in to the market, e.g. through:
 - **Providing a dedicated team and contact** for innovators – this remains available up to a year after an innovator is authorized
 - **Helping** these businesses **understand the regulatory framework** and its applications to their businesses
 - **Assisting** in preparing and making **applications for authorization**
- > FCA started handing out **conditional/temporary permits**, enabling startups to delay full compliance by two years, decreasing the upfront costs of compliance
- > The FCA will introduce a **regulatory sandbox**¹⁾ in the course of 2016 – a "**safe space**" in which businesses can test innovative products, services, business models and delivery mechanisms without immediately incurring all the normal regulatory consequences of pilot activities
- > The UK's **Bank Referral Scheme**²⁾ supports alternative financing
- > The UK was a **pioneer** in implementing the **Payment Services Directive (PSD)**
- > It sends representatives **international FinTech events to persuade FinTech companies to move to the UK**

Topics to address (front-runner)

- > Understand **broader regulatory support needs** – e.g. advice and support during application procedures
- > Develop an action plan for realization
- > Identify global best-practices for "innovative solutions"
- > Create framework for experimentation
- > Start providing **conditional/temporary permits** for FinTech companies while ensuring they comply with certain regulations – evaluate performance periodically

1) A sandbox (in the context of software development) is an isolated computing and testing environment, often used to run untested or untrusted codes and programs; 2) The Bank Referral Scheme commands banks to refer alternative financing providers to rejected clients

In response to FinTech innovation, major financial institutions have launched different sets of actions

Typology of financial institution actions with FinTech companies

1 Connect with FinTechs



Innovation lab

Physical space that allows for collaboration with entrepreneurs and professionals of the financial sector



Hackathon/application contest

Event in which computer programmers and developers build a project in a short period of time (1-2 days)



Partnership

Financial institution partnering with tech companies or educational institutions to get in touch with the FinTech ecosystem

2 Operate with FinTechs



Accelerator and incubator programs

Collaborative space where those working for startups develop their project over a few weeks (accelerators) or within a longer timeframe (incubators). They have access to valuable expertise ("hard" and "soft" skills) and to potential investors (VC, business angels, etc.)

3 Invest in FinTechs



Direct investment

Investment in FinTech companies through in-house venture capital (VC) fund or direct investment of the financial institution in the startup









Investment in specialized VC and Private Equity funds

Using financial institutions' money to target investment in FinTech companies

Dutch banks are active in FinTech through multiple modes – However further development of initiatives required

Illustration of financial institution strategies regarding FinTech innovation

		 Rabobank	 ABN-AMRO	Assessment of maturity
1 Connect	<ul style="list-style-type: none"> > ICEC (ING Customer Experience Center) > Multiple Hackathons > Partnership ECE (Erasmus Centre for Entrepreneurship) 	<ul style="list-style-type: none"> > Partner of Dutch FinTech Hackathon 	<ul style="list-style-type: none"> > Collaborations with over 15 startups > Founding partner of innovation hub "X" 	
2 Operate	<ul style="list-style-type: none"> > ING innovation studios, collaboration with startups in an ING lab in Amsterdam > FinTech Village, "<i>Boost your Startup and accelerate your proof of the concept</i>" 	<ul style="list-style-type: none"> > Partner of Startupbootcamp FinTech in London and NYC > Partner of Rockstart 	<ul style="list-style-type: none"> > Startupbootcamp (access to contacts and partners around the world) > Munt Square 	
3 Invest	<ul style="list-style-type: none"> > Investment in Kabbage, a leading technology and data platform > Investment in WeLab – a Chinese peer-to-peer lending platform > Seed funding for startups in innovation studios (convertible) 	<ul style="list-style-type: none"> > Rabobank FinTech Fund managed by Catena Investments > Rabobank engaged in investments in MyOrder, Facturis and Fundipal 	<ul style="list-style-type: none"> > Digital Impact fund EUR 10 m is available in the fund 	

The collaborative FinTech environment should take a broader perspective – Inclusion of government and regulators is essential

Assessment of collaboration mechanisms and required actions

Situation assessment

- > **There are many initiatives** in the field of FinTech, both from established players (e.g. ABN AMRO's Digital Impact Fund, ING and AEGON's equity stakes) and the start-up community (e.g. Holland FinTech, Startup Delta)
- > **Initiatives** from both within the start-up landscape as well as from established firms largely **remain separate** – everyone is working on their own initiative
- > Collaboration between international hubs is barely present despite (relative) proximity (e.g. London)
- > There is a **lack of coordination**, which is required to **ascend to the next level**

Topics to address (follower)

- > Establish collaboration mechanisms to **jointly address** important topics with respect to the **future of Financial Services** – let **private sector** take the **lead**
- > Initiate **cross-border collaboration** initiatives
- > Include **public partners** (legislative and executive bodies)

Various European FinTech initiatives have been undertaken through successful PPPs – Several focus areas have been identified

Two leading FinTech initiatives and actions

Best practices: leading European examples



- > Opened in Mar-2013 by Canary Wharf Group
- > Hosted over 1,000 events and 90,000 visitors
- > Hosts c. 170 companies (500+ people)



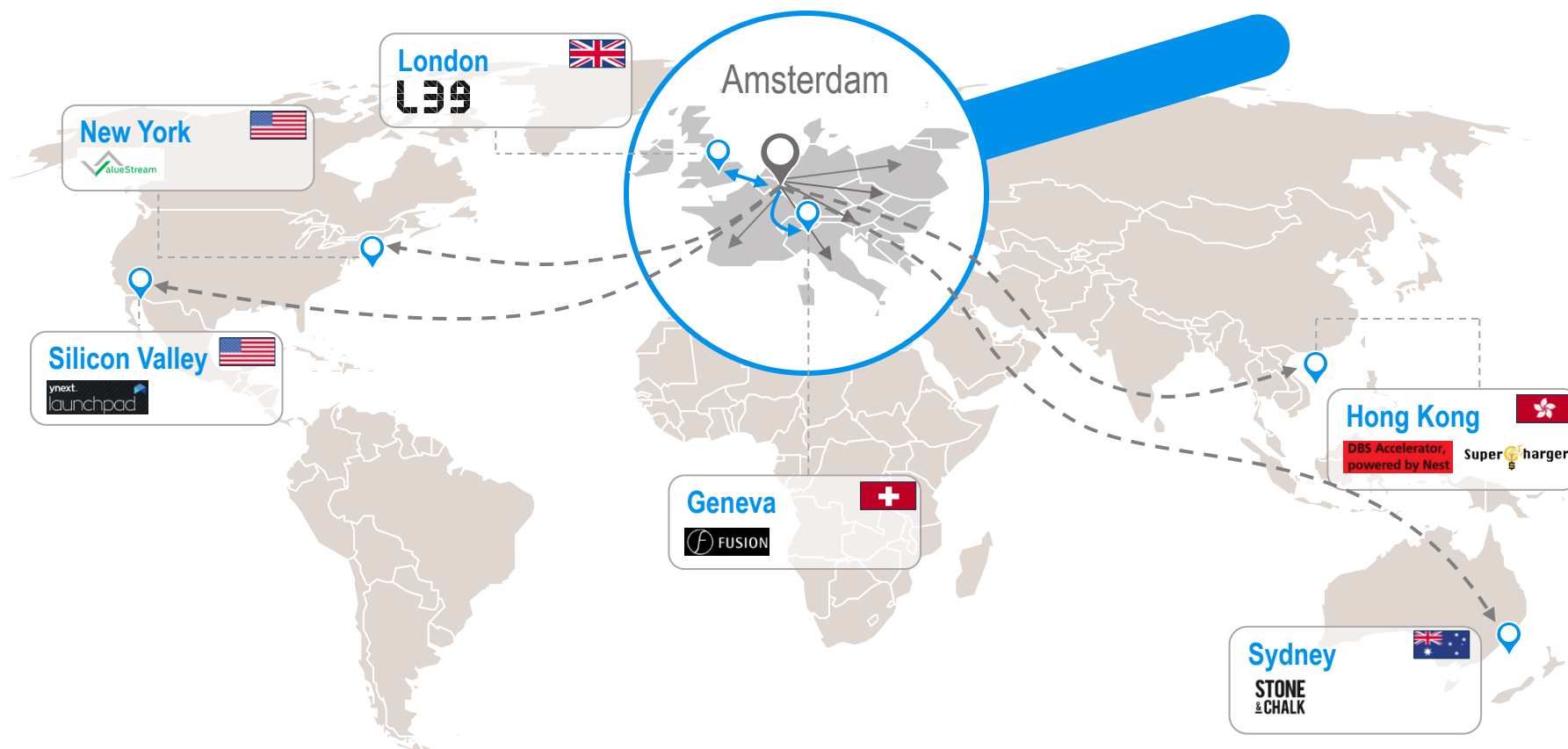
- > Fusion was launched in early 2015 by Polytech Ventures
- > 12-month acceleration program which enlists 10 FinTech startups from all over the world

Topics to address (front-runner)

- > Establish a **physical infrastructure** that accommodates a meeting place
- > Arrange sufficient **access to early-stage** as well as **growth-stage funding**
- > Develop a well thought-out **program support** throughout different **growth stages**
- > Establish and grow a **balanced and diversified network** that partners can leverage
- > Arrange structured **interaction** between startups and **financial institutions**

Dutch FinTech should connect and collaborate with FinTech initiatives worldwide – Can serve as the gateway to continental Europe

Potential collaborations – Overview of FinTech initiatives (non-exhaustive)





Appendix



Netherlands scores well on "Business environment" and "Talent & skills" in Europe – NL just behind benchmark countries

Assessment and substantiation of key success factors (1/5)

Key success factors

Substantiation

Business environment

The Netherlands has an attractive business environment



Economist Intelligence Unit – European Top-10 Business environment index (2014):

- | | |
|--------------------|------------------------------|
| 1. Switzerland (2) | 6. Germany (12 ↓) |
| 2. Sweden (6 ↓) | 7. Ireland (15 ↑) |
| 3. Finland (9 ↓) | 8. Netherlands (16 ↓) |
| 4. Denmark (10 ↓) | 9. Belgium (17 ↓) |
| 5. Norway (11 ↑) | 10. Austria (18 ↓) |

(x↑↓) Global rating; rose or dropped compared to index of 2009-2013

Talent & Skills

The Netherlands also scores relatively high on talent and supply of relevant skills



Economist Intelligence Unit – European Top-10 Global Talent Index (2015):

- | | |
|--------------------|------------------------------|
| 1. Denmark (2) | 6. Germany (11 ↑) |
| 2. Finland (3) | 7. Netherlands (13 ↓) |
| 3. Sweden (4 ↑) | 8. United Kingdom (14 ↓) |
| 4. Norway (5 ↓) | 9. France (16 ↑) |
| 5. Switzerland (9) | 10. Ireland (17 ↓) |

(x↑↓) Global rating; rose or dropped compared to index of 2011

Although the Dutch population is of limited size, customer base quality is good – Entrepreneurial community is very strong

Assessment and substantiation of key success factors (2/5)

Key success factors

Customer base

The population is small compared to other countries, however mobile penetration is very high



Entrepreneurial community

High and increasing share of entrepreneurs, and strong development of startup hubs



Substantiation

Population, 2014

> 16.8 m

Online/mobile penetration and digitization, 2014 [%]

	Internet	Smartphone	Tablet	Social media	Online shopping
NO	96	68	55	88	76
UK	92	68	41	68	87
NL	93	63	50	86	76
US	87	65	37	68	52
DE	86	50	32	65	81

- > Europe's **#1 connected economy**: strategic location; international business climate and superior infrastructure
- > The Netherlands is home to ~1.5 m companies – growth in 2014: 64,000 companies **especially smaller business with less than 50 people**
- > The Netherlands is home to **10+ technology hubs in all industry areas**, maximum 90 minutes away from each other – e.g. Delft with i.e. industrial solutions and Wageningen specializing in food and agriculture
- > It is a **natural incubator of innovations** before they are rolled-out to rest of Europe: vocal and engaged customers are easy to reach alongside internationally-recognized companies

Financial attractiveness in the Netherlands is at benchmark level – Investments in Dutch FinTechs reached > EUR 3 bn in 2014

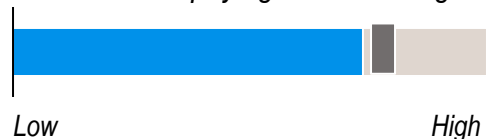
Assessment and substantiation of key success factors (3/5)

Key success factors

Substantiation

Financial attractiveness

The Netherlands scores relatively high in the ease of paying taxes ranking



World Bank Group – European Top-10 Paying taxes (2016):

- | | |
|-------------------------|------------------------------|
| 1. Ireland (6) | 6. Finland (17↑) |
| 2. Macedonia, FYR (7) | 7. Switzerland (19↓) |
| 3. Denmark (12) | 8. Luxembourg (21↓) |
| 4. Norway (14↑) | 9. Malta (25↑) |
| 5. United Kingdom (15↑) | 10. Netherlands (26↓) |

(x↑↓) Global rating; rose or dropped compared to index of 2009-2013

Potential funding

Investments in Dutch FinTechs reached > EUR 3 bn in 2014



- > In 2014 **EUR 3.1 billion** was invested in **386 Dutch companies**– in 2013 this was EUR 2.4 billion in 331 companies
- > In the same year **EUR 169 million of venture capital** was invested in **226 Dutch startups**
- > **Netherlands ranks #3** in total amount of **VC deals** in Europe

(Legal) regulations in NL do not fit FinTech companies – Government is willing to support but is still developing knowledge and vision

Assessment and substantiation of key success factors (4/5)

Key success factors

Substantiation

Regulation and legal framework **A**

Regulation does not fit FinTech and is often stricter than European regulation; lack of legal clarity hinders business



Regulatory supervision **B**

Government shows willingness to support FinTech, however knowledge and leading role are under development



- > **Non-fit** between FinTech companies and licensing regulations and procedures of regulatory agencies
- > Leading to **ambiguity in decision-making authority** and potentially **no or inconsistent rulings** from supervisors
- > Unclear whether high capital requirement regulations and taxes as a result of the financial crisis should apply to FinTech companies
- > **Complex "alphabet soup" of regulatory initiatives**, which is generally unclear, and particularly not applicable to FinTech
- > Dutch regulation is generally **stricter than European and/or international regulation**



- > **Limited FinTech knowledge** hindering regulatory developments – addressed by AFM with dedicated team
- > **Fairly limited advisory role**, related to knowledge gap and clarity of legal status
- > Regulation **coordination framework** to be developed
- > **Willingness to support/ learn** is present
- > Government also has shown willingness to **support industry development via subsidies**



Collaboration between all parties could be improved

Assessment and substantiation of key success factors (5/5)

Key success factors

Substantiation

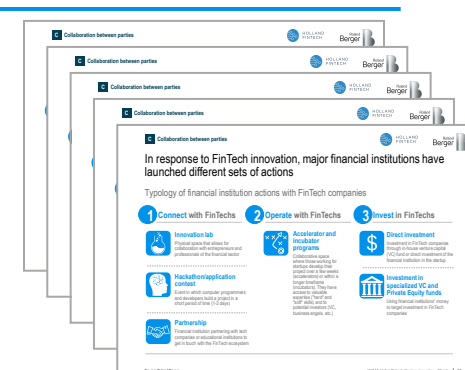
Collaboration between parties

C

The collaborative FinTech environment should take a broader perspective



- > There are **many initiatives** in the field of FinTech, both from established players as well as from the start-up community
- > However there is a **improvement potential in coordination**, which is required to **ascend to the next level**
- > It is important to **involve government** (legislative power) **and regulators** (executive power) into discussions about FinTech
- > **Established industry players should also be included** to strengthen and focus collaborative efforts
- > **Cross-border collaboration with other FinTech hubs** to be developed







Level 39 and Fusion serve as two prime examples of successful FinTech initiatives

Key characteristics of two leading examples (1/3)

Topic	 Level 39 	 Fusion 
Key statistics	<ul style="list-style-type: none"> > Opened in Mar-2013 by Canary Wharf Group > Hosted over 1,000 events and 90,000 visitors > Hosts c. 170 companies (500+ people) > Grew from 4 to 14 employees in 2 years 	<ul style="list-style-type: none"> > Fusion was launched early in 2015 by Polytech Ventures > 12-month acceleration program which enlists 10 FinTech startups from all over the world
Concept	<ul style="list-style-type: none"> > Level 39 is Europe's largest technology accelerator space > Members are looking to create, test, market and deliver scalable world-class financial, retail and future cities technology products and services > The accelerator is rare as it does not take equity in member companies > As a second concept, L39 opened High Growth Spaces: space where companies go to grow. Teams between 8-30 are best suited to these spaces, and have the opportunity to take space at Canary Wharf as a tenant 	<ul style="list-style-type: none"> > Focus on well established Swiss financial services, such as Asset & Wealth Management, Insurance and Commodity Trading > Areas of interest include: cybersecurity, data privacy, Blockchain, social analytics, Artificial Intelligence, mobile applications, peer-to-peer platforms and payments > “From beta to revenues”: To have an amazing product/service is not enough to succeed. Startups need to have an execution plan; Fusion will guide startups on the path to commercial success





Level 39 and Fusion serve as two prime examples of successful FinTech initiatives

Key characteristics of two leading examples (2/3)

Topic	 Level 39 	 Fusion 
Key collaborators and partners	<ul style="list-style-type: none"> > Initiated by partner company Canary Wharf Group > Multiple innovation programs (e.g. Accenture's Fintech Innovation Lab, EY Startup Challenge and more) > UBS started an innovation lab at HighGrowth:42 > Multiple incubators, accelerators and universities 	<ul style="list-style-type: none"> > Temenos Group AG > Polytech Ventures > SwissCard > Notz Stucki Asset Managers > Global financial products
Support of public partners	<ul style="list-style-type: none"> > Impressive media attention due to speech of Boris Johnson (Mayor of London) at grand opening in 2013 	<ul style="list-style-type: none"> > Fusion is supported by the Industrial Land Foundation of Geneva (FTI), a local public-sector body that supports companies to establish in and around Geneva
Availability of physical meeting place	<ul style="list-style-type: none"> > Three floors totaling ~7,500 m² at One Canada Square tower in Canary Wharf > ClubLounge 39 – a unique members' club/bar/restaurant > Space 39 – for conferences & exhibitions (50-250 guests) 	<ul style="list-style-type: none"> > Over 500 m² of premium city center space, largely open plan but with plenty of break-out areas for brainstorming, "chill-out" zones and recreational areas > All with state of the art IT infrastructure

Level 39 and Fusion serve as two prime examples of successful FinTech initiatives

Key characteristics of two leading examples (3/3)

Topic	 Level 39 	 Fusion 
Program support	<ul style="list-style-type: none"> > Startups are free to choose from different forms of membership (drop-in, hot desk, fixed desk) > Program support encompasses different growth stages, and will also involve a relocation service within the Wharf 	<ul style="list-style-type: none"> > Startups are paired-up with a mentor, who assists in developing a viable operating plan > Post-program support currently only consists of a relocation service
Team	<ul style="list-style-type: none"> > Dedicated team of 14 people, led by Eric van der Kleij > Network of 70+ mentors 	<ul style="list-style-type: none"> > One program director > Network of 40-50 mentors and experts
Access to funding	<ul style="list-style-type: none"> > No direct funding, though great access and exposure to London's angel investors and venture capital firms through curriculum, and formal and informal events 	<ul style="list-style-type: none"> > No direct funding, but Polytech Ventures (venture capitalist that is a partner of the initiative) will syndicate investment on a case-by-case basis

The UK is a global leader in FinTech – Four policy settings helped it achieve this goal

Policy initiatives to stimulate FinTech in the UK

Regulatory restraints as a driver

- > Government regulation has prompted Financial Service industry players to monitor their activities more closely, move out of certain areas, and decrease their overall lending
- > This created opportunities for innovative players to sell their solutions to banks or fill the space vacated
- > This has had a negative impact as well, leading to complaints from some high street banks: "It is not easy for banks to be focused on innovation when your institution has spent the last few years distracted by fines", former CEO of Barclays stockbrokers

Direct subsidies

- > The UK government has provided a range of tax subsidies and direct investments to the FinTech sector over several years
- > Also the UK Trade and Investment Commission is actively used to promote London as a FinTech destination

Competition laws

- > The UK government is encouraging greater competition in the finance sector, and sees FinTech as a way to diversify it
- > It is using a range of competition laws to encourage development of FinTech companies and allowing customers to use them
- > British banks are now required to share their data on small businesses, refer SMEs they reject to designated alternative lending platforms and are being pushed to adopt an Application Programming Interface, which will allow new players to use their data and technology to develop new products – collectively, these policies make it easier for the FinTech sector to operate

Supportive regulatory environment

- > The UK government is widely regarded as one of the most welcoming to FinTech
- > Project Innovate and the proposed "regulatory sandbox" are two key UK policies which FinTech innovators value highly
- > In addition, the UK government has taken a "right touch" approach to the sector, providing enough regulation to maintain investor confidence while giving new players the freedom to innovate