



## **Digital banking trends and predictions**

Focus on PSD2 and GDPR

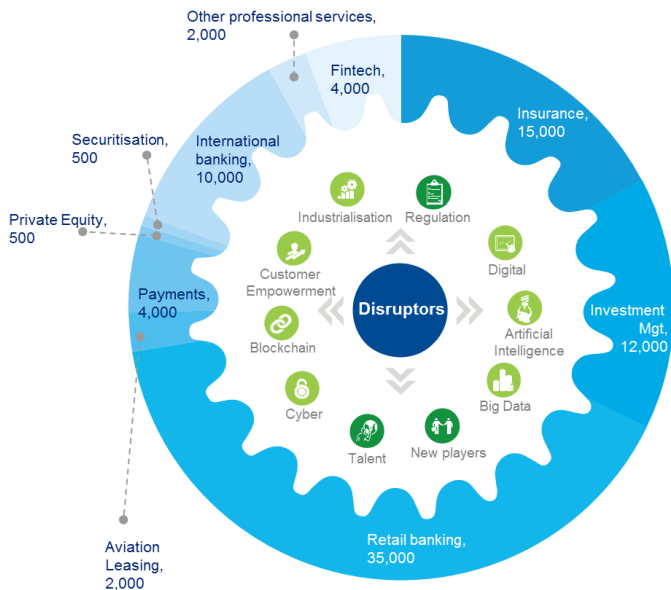
Lan Filipič, Deloitte Central Europe, May 2017

# Certain disruptive forces will shape the future success

Disruptors can be broadly grouped into four categories: Technology, Participants, Data and Processes and Regulation

The heaviest impact is clearly from new technologies which are also a new and evolving disruptive force in the FS sector.

The other disruptive forces have always existed in the sector but are becoming an increasing source of disruption driven in turn by technology, costs and wider macro-economic factors



Technology	Participants	Data & Processes	Regulation
<p><b>Blockchain</b></p> <p>Sequential distributed transaction database using secure cryptography. Creation of secured datasets has the potential to transform the FS value chain. Rubix, US Insurance USAA, Chainsmiths</p>	<p><b>New Players</b></p> <p>Non-traditional players, Startups, Tech companies, Social Media, Retailers, Telcos are entering the FS Industry and creating new offerings. Banking – Metro Bank, Movenbank, Payments – Realex, Insurance – Googles Gocompa</p>	<p><b>Industrialisation</b></p> <p>Where volume-intensive, commoditised and non-compete tasks are standardised and automated in scalable centralised model. Anti-Money Laundering requirements. Know your customer requirements. Corporate Actions (Investment Management).</p>	<p><b>Business Model Analysis</b> regulators will put a bigger emphasis on viability and sustainability of the business model putting some key challenges in place for Strategy</p> <p><b>Distribution models</b> focus on conflicts and commissions meaning many distribution models will need to change and adapt</p>
<p><b>Artificial Intelligence</b></p> <p>Programmed Intelligence exhibited by machines - machine learning is the next level of improved performance from analysing prior experience. Kenso, Wealthfront, Nutmeg</p>	<p><b>Talent</b></p> <p>Global demand for talent in skilled roles. Globalisation of talent. Supply and demand shortage. Ulster Bank and Dogpatch – co-sharing space to create innovative environment where FinTech talent will flourish.</p>	<p><b>Big Data</b></p> <p>Ability to process large complex unstructured data sets and monetise data assets. Deloitte Analytics</p>	<p><b>Conduct risk and acting in the best interests of the customer</b> financial institutions must act in the customer's best interests</p>
<p><b>Cyber Security</b></p> <p>New security protocols necessary for mobile digitised, tech enabled FS tools to minimise hack ability. CyberEdge from AIG, DigiCore – Cyber Security</p>	<p><b>Customer Empowerment</b></p> <p>A generation who have grown up with social media, mobile devices and internet offerings that have fundamentally different expectations. Bonkers.ie customer portal allows comparison of best financial products in Irish market. CurrencyFair FX</p>	<p>IBM Watson collaborating with DBS Bank to improve customer experience.</p>	<p><b>PSD2</b> aims at opening the (banking) market to further drive competition and fostering innovation</p>
<p><b>Digital</b></p> <p>Conversion of manual information and processes into digitally enabled data and capabilities. Atom, Brite:Bill for billing</p>			<p><b>General Data Protection Regulation (GDPR)</b> is bringing a revolution in the scope of obligations for those companies that store and process personal data</p>



**Focus of today's presentation**

# Building on PSD foundations, PSD2 aims at opening the (banking) market to further drive competition and fostering innovation

## Status Quo (since 2007)

**PSD:** Legal framework for Single Euro Payments Area (SEPA):  
Efficient & simple local and international payments in EUR



"Limited Networks"  
(Fuel / store card, etc.)



Telecommunication / mobile  
communications



New payment services  
(Payment initiation, Account aggregation etc.)

## PSD2 Filling the gaps

- PSD2 extends the original scope of the PSD in order to foster innovation by increasing competition.
- It effectively opens the EU online payments and account information services market to new entrants.

Goals

Efficiency

Security

Competitive  
Equality

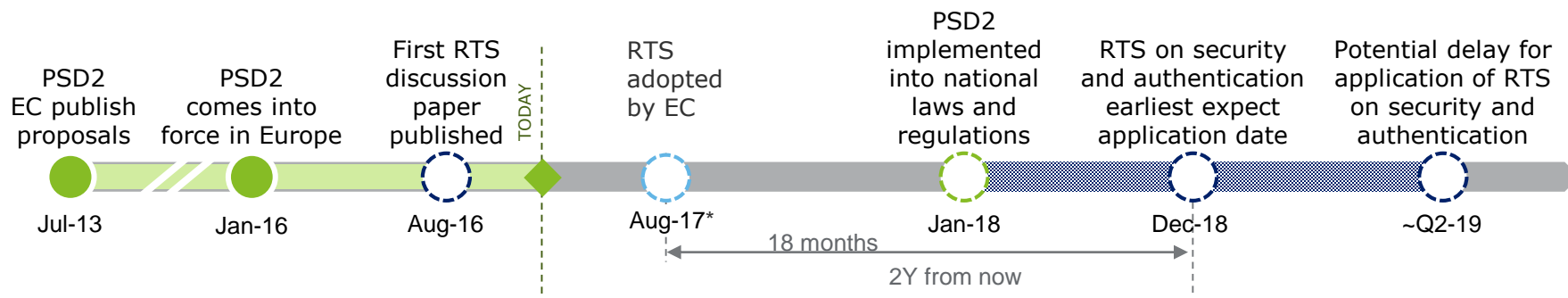
Consumer  
Protection

Price  
Competition

### Key areas of change are:

1. Extension of Scope
2. **Opening the market for Third Party providers**
3. Security and authentication requirements

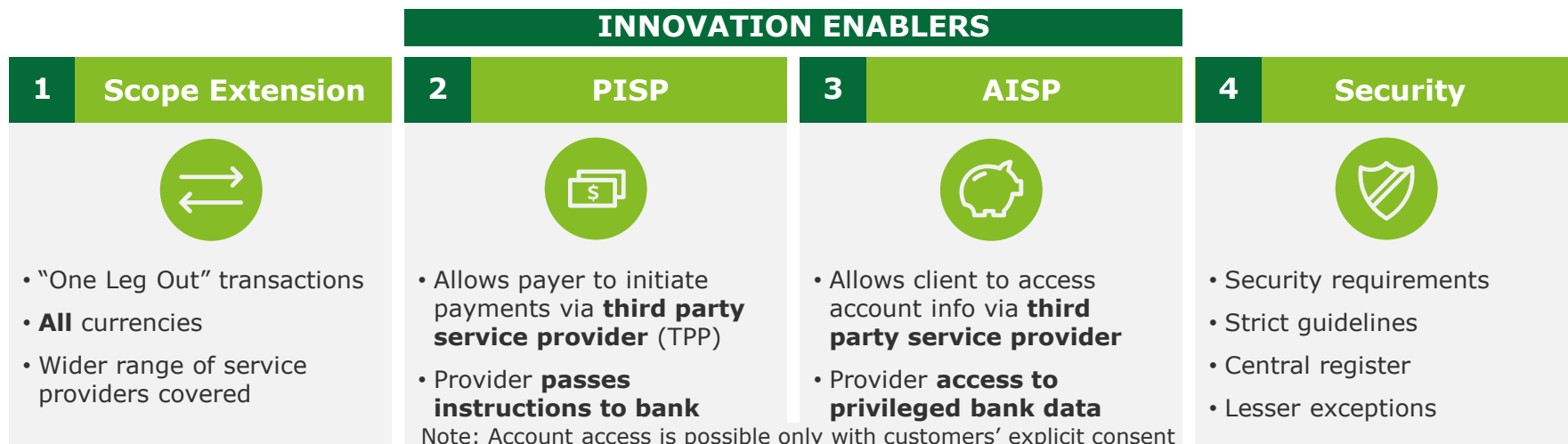
## PSD2 Regulatory timeline



PSD2 will come into force in January 2018; key Regulatory technical standards (RTS) on security and authentication are expected to follow by December 2018 at the earliest and might be delayed until Q2 2019

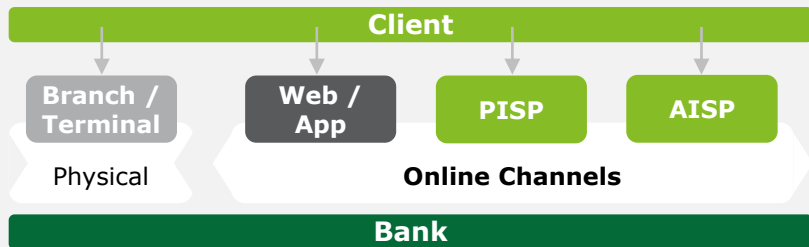
# PSD2 represents a key inflection point towards an open banking ecosystem, the impact of which could be felt as early as 2018

## PSD2 – Key components and new roles



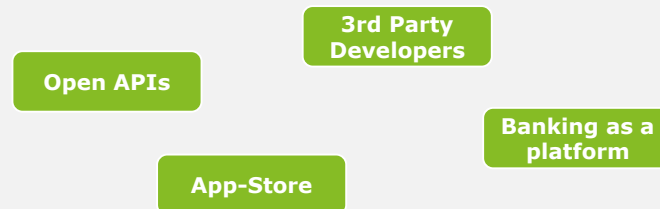
## PSD2 – Effects on banks

- Push to develop **open banking** market by legislation
- Banks forced to open their platforms **via APIs** to provide TPPs access to **previously privileged data**



## PSD2-enabled Open banking

- Movement towards **opening up banks data** to third party providers (TPPs)
- **New multi-banking added value services** that help consumers and businesses transact, save, borrow, lend and invest



# Overall market development will depend on whether customers adopt open banking enabled by PSD 2

## Would you feel comfortable with 3rd parties initiating payments on your behalf?

 Agree or strongly agree    Indifferent    Disagree or strongly disagree



Even before new PISP providers entered the market, over **half of account holding adults would be comfortable** with third parties initiating payments on their behalf with **76% preferring a traditional bank** as a PISP provider.

## Would you trust a 3rd party as much as a bank with your data?

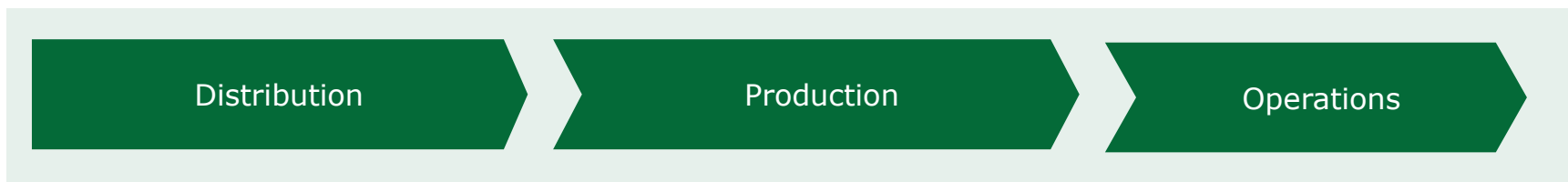
 Would trust a third party as much as a bank    Would not trust a third party as much as a bank



**Already 30% of account holding adults would be comfortable** with third parties having access to their data with **65% preferring a traditional bank** as a AISP provider.

# Retail banking value chain will disaggregate following the impact of open banking tendencies

## Current end-to-end model (banks dominating)



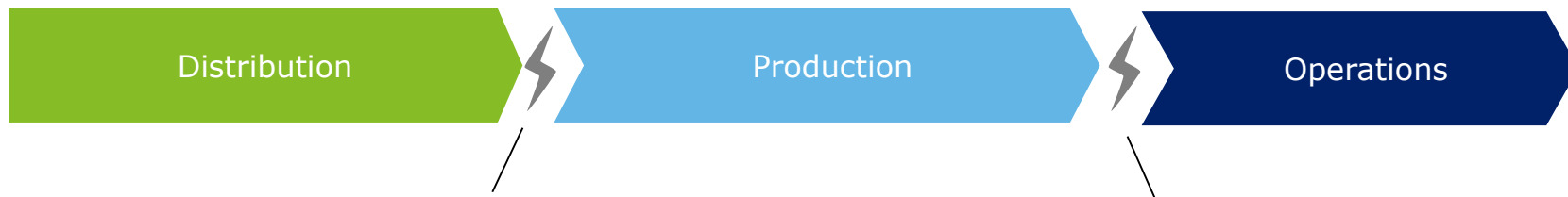
**Banks** own their own distribution channels (e.g., branches, digital channels, contact centres)

**Banks** define own products (design, risk assessment, pricing, balance sheet)

**Banks** support their business operations (back office)

## Target model in an open-banking environment (banks and non-banks)

- Increasing competition from non-banks as well as from specialized banks
- Specialization in one or more (sub-)steps of the value chain to increase its competitive advantage
- Leveraging global scale to protect profitability



*Accelerated by PSD 2, there will be new players (such as AISPs) as well as Europe-wide offer aggregators – independent from products development (e.g. N26)*

*Increasingly banks outsource significant parts of their back-office operations to specialized providers (e.g. Wipro, Cognizant), or even reorganize their back-office as an ecosystem of different providers*

# The choices made by consumers and firms can lead to very different ecosystem scenarios



## 1. Business as usual



- Regulation stabilizes the sector
- Millennials adopt traditional consumer patterns
- Clients trust the banks
- Financial institutions innovate by themselves
- Rise in interest rates

*Financial institutions hegemony*



## 2. New equilibrium



- Stronger regulation in place
- Privacy and cybersecurity concerns
- Global players consolidate
- Slightly rise in interest rates
- Banks invest in fintechs

*Banks and Tech-giants coexist*



## 3. Utility



- New regulation drives competitiveness
- Millennials prefer fintechs over banks
- Reinforcement of Start-ups and Tech-giants
- Low interest rates drive cost efficiency

*Banks as mere infrastructure*



## 4. Disruption



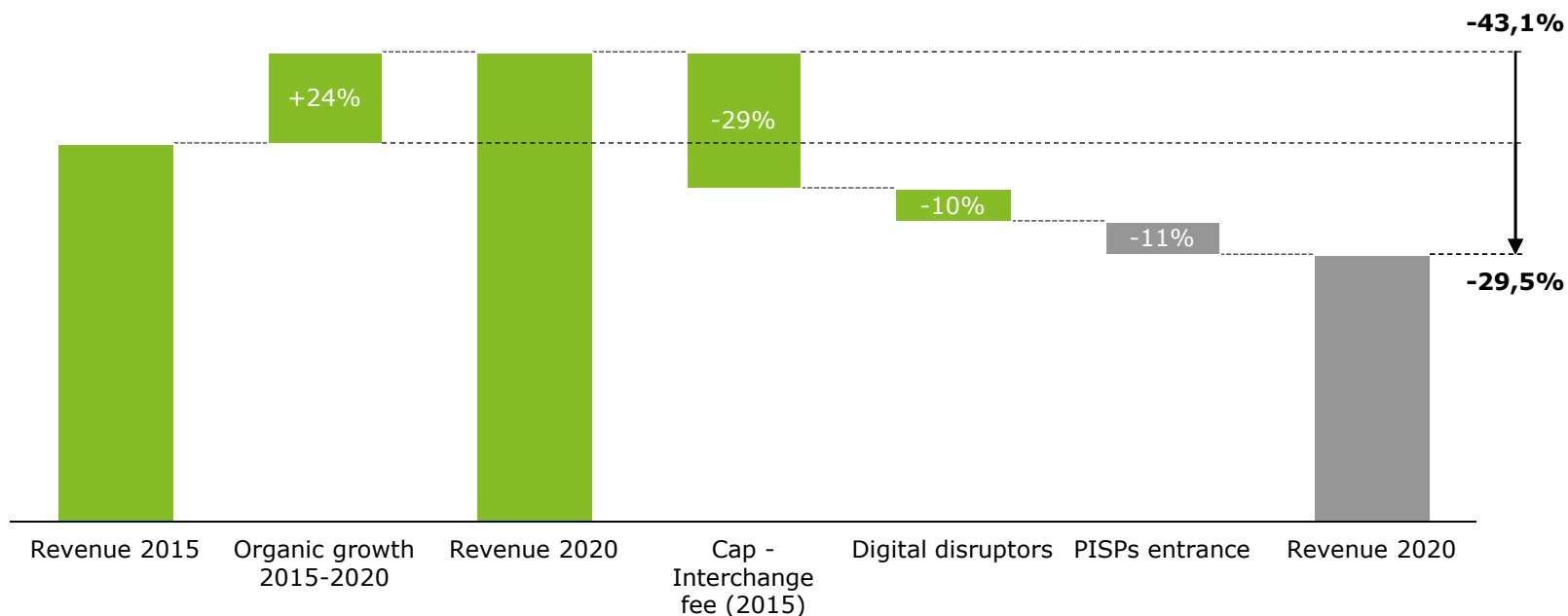
- Regulators allows experimentation
- Decentralization, driven by blockchain
- Internet of value
- Death of branches

*Change in the concept of Money*



# Banks may lose up to 43 percent of their current payments revenues by 2020

## Payments evolution (% , 2015-2020, € B)



### Notes:

1. Issuing, acquiring and processing fees included
2. Only cards payments revenues considered
3. Interest income from credit cards and cross border retail payments excluded

### Assumptions Digital Disruptors:

1. Apple Pay accounts for 15% of card transactions value by 2020
2. E-wallets (e.g. PayPal) account for 6% of retail transactions by 2020
3. MPOS account for 5% of card transactions value by 2020

### Assumptions PISPs:

1. PISPs erode 33% of online debit cards and 10% of online credit cards
2. PISPs acquire 90% of their transactions online and 10% in-store by 2020
3. PISPs in-store volumes originate 80% from debit cards and 20% from credit cards
4. PISPs account for 16% of online retail payments by 2020
5. PISPs account for 0.5% of in-store retail payments by 2020
6. PISPs account for 4% of retail payments (e.g.: cash, cards, e-wallets, PISPs) by 2020






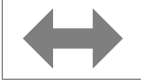
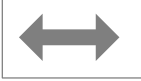


# Influences on financial result are complex and overall impact not easy to estimate

## Revenue and cost impact

## Implications

## Impact

Revenue and cost impact		Implications	Impact
Key revenue drivers	Fee revenues	<ul style="list-style-type: none"> <li>• Opportunity to charge fees for value-added services provided through APIs (basic services mandated by PSD2 expected to be free as banks cannot discriminate on charges, and they don't charge customers today)</li> </ul>	
	Interest revenues	<ul style="list-style-type: none"> <li>• Potential loss of float revenues as newer players operate payment accounts</li> <li>• Likely displacement of some credit card volumes as a result of shift to non-card payments</li> </ul>	
	Transaction revenues	<ul style="list-style-type: none"> <li>• Interchange income will likely be impacted as card payments are displaced</li> <li>• Price pressure on transaction fees owing to increased transparency</li> </ul>	
Key cost drivers	Processing costs	<ul style="list-style-type: none"> <li>• Increased IT and compliance costs</li> </ul>	
	Default cost	<ul style="list-style-type: none"> <li>• Ability to leverage additional data points and improve underwriting abilities</li> </ul>	
	Cost of risk/fraud	<ul style="list-style-type: none"> <li>• Currently unclear who bears the cost of risk / fraud in the new value chain</li> </ul>	
	Acquisition cost	<ul style="list-style-type: none"> <li>• Customers are likely to make banking choices through other intermediaries / integrators</li> </ul>	

# We have identified five key topics for a strategic discussion

## What we know

In investments, the value chain is already very much disaggregated, with any bank selling funds from any asset manager

Aiming at the opportunities of PSD2, some banks and non-banks are already starting to offer multi-bank apps

Similarly, some banks have already voluntarily opened up their APIs, at least partially

Today, there are very substantial price differences across markets for comparable products; even within the EU

Due to PSD2 and digitalization more broadly, transaction banking prices will decline sharply

## What we believe

As retail banking matures, a similar disaggregation will occur, accelerated by PSD2

While many banks may initially try to defend against the threat of PSD2, an increasing number will aggressively pursue a leadership position

There will be a race for first-mover advantage in a future ecosystem

PSD2 will foster EU-wide competition; EU will aim to create a more homogeneous market, as already implemented for SEPA payments

Banks need to think more broadly how to monetize their assets (trust/privacy, customer data, ...) in a future ecosystem

## Examples



## Key question

**1** Where to play along the value chain?

**2** How to approach this topic?

**3** When to act?

**4** Where and how to play?

**5** How to generate additional revenues?

# Banks and banking groups can make very different choices on the identified option space

## Question

## Answers

Question	Answers		
<b>1 Where to play along the value chain?</b>	Distributor	Producer	Operator
<b>2 How to approach this topic?</b>	Progressive	Cooperative	Defensive
<b>3 When to act?</b>	Act as soon as possible (now)		Act as late as possible
<b>4 Where and how to play?</b>	Act as one	Market cluster specific approach	NWB individual approach
<b>5 How to generate additional revenues?</b>	Innovations in current business model	Reinventing business model	Non-traditional revenue streams

1

There will be 4 main types of players on financial market shaping the options for more complex hybrid models



- Providing sales and service on **products from multiple providers** (brokerage model, with or without own products)
- Focus on **customer relationship**, channels, trust, advice, sales and service

- Producing **banking products for other distributors** without own distribution (branded or white-label)
- Focus on **risk assessment and pricing**, balance sheet management, relationship with distributors/brokers, possibly branding

- Manage **back-office processes for multiple banks**
- Focus on **efficiency and scale**, process management, technical infrastructure

End to end player

- Continue to be **distributor, producer and operator at the same time**, while still opening up to cooperation on all three stages
- Requires much **clearer organizational pillars** in order to apply the different paradigms more effectively

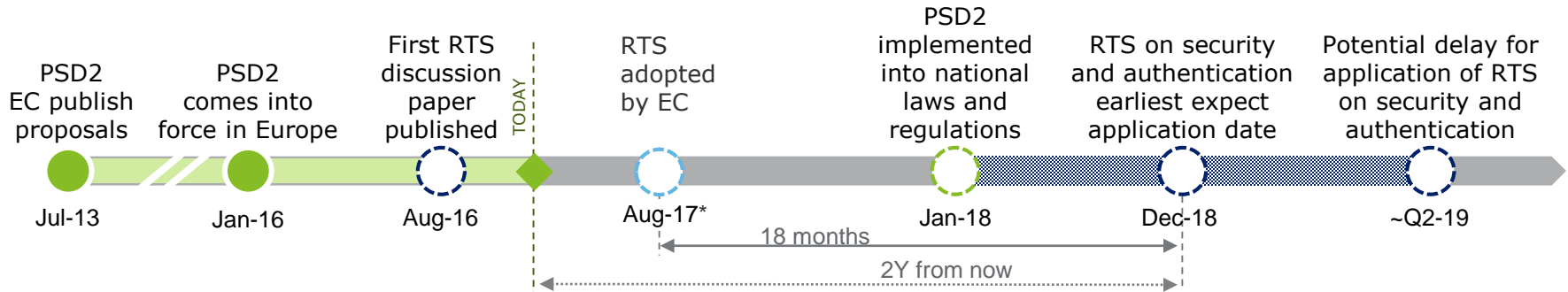
## 2

# Depending on banks' aspirations, we see three strategic approaches

Strategy	Description	Prerequisites
Defensive	<ul style="list-style-type: none"> <li>• Belief that PSD2 impact is limited to <b>legal compliance</b>, limit implementation to <b>regulatory minimum</b></li> <li>• Aim to <b>defend own customer interface</b> against third parties</li> <li>• As one logical consequence, the bank would consider <b>lobbying against</b> any extension or acceleration of PSD2</li> </ul>	<ul style="list-style-type: none"> <li>• Large base of <b>less digitally savvy</b>/innovation-agnostic customers</li> <li>• Ability to create a compelling digital customer experience <b>without participating in a broader ecosystem</b></li> </ul>
Cooperative	<ul style="list-style-type: none"> <li>• Belief that it is <b>time to respond</b> to the danger of upcoming fintechs and third parties, and that this can also be an opportunity</li> <li>• The bank to <b>actively participate</b> in a broader digital ecosystem</li> <li>• <b>Selectively yet actively</b> foster cooperation with fintechs and other companies</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to develop a profitable and attractive <b>strategy for cooperation</b> with third parties</li> <li>• <b>Moderate investments</b> related to digital solutions and infrastructure</li> <li>• Willingness to <b>give up some</b> parts of the value chain/rely on partners</li> </ul>
Progressive	<ul style="list-style-type: none"> <li>• Belief that PSD2 provides the momentum toward true <b>open banking</b></li> <li>• Not merely opening up APIs (as required anyway), or forming selective partnerships, but <b>setting market standards</b> (e.g. market-wide technical platform) and commitment to become <b>clear market leader</b> (e.g. the single best front-end for customers of any bank)</li> <li>• As one logical consequence, the bank would consider <b>lobbying for</b> the acceleration of PSD2 and extension to other products</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Need of very significant investments</b> in digital solutions and infrastructure</li> <li>• Requires to be the first-mover and/or quality leader</li> <li>• Complete understanding of new ecosystem, incl. ability to <b>monetize</b> new customer data</li> </ul>

# 3 Technical standards will force banks to open APIs relatively late, first movers are already open to 3<sup>rd</sup> parties

## PSD2 Regulatory timeline



PSD2 will come into force in January 2018; key Regulatory technical standards (RTS) on security and authentication are expected to follow by December 2018 at the earliest and might be delayed until Q2 2019

\*Note: Depending on the speed of the E. Parliament and Council scrutiny process RTS adoption may be delayed until Dec-17



### Open API usage:

Developed open API for adoption by third parties, and openly stating they are the bank whom help others make money through their use.

Has six open APIs for developers:

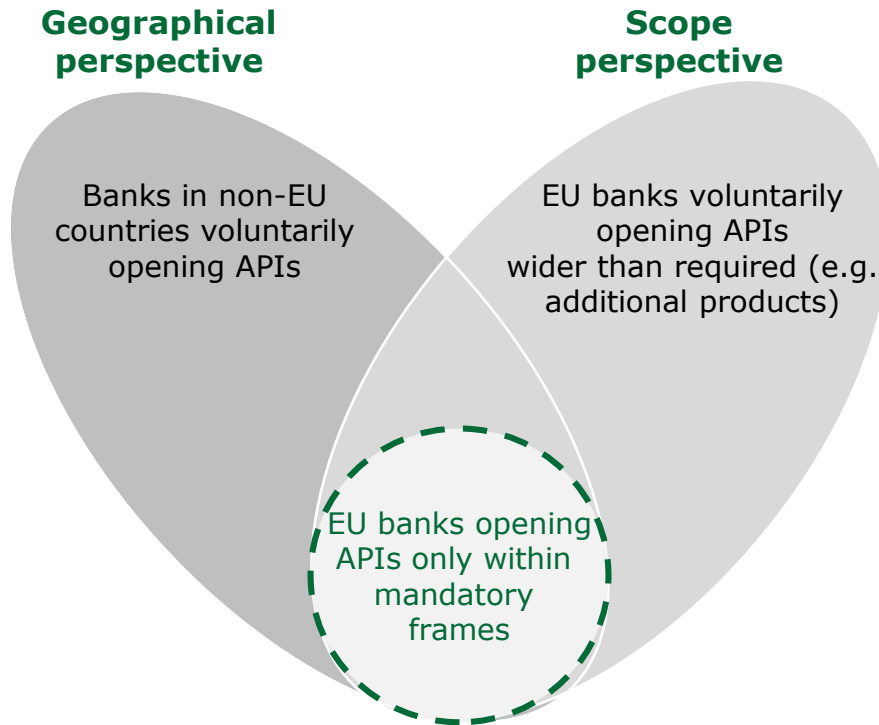
- Paystats, BBVA Connect, Identity, Accounts, Cards, Money Transfers.

### BBVA Spain

<p>BBVA SPAIN <b>PayStats</b></p> <p>Dive into the aggregated data of BBVA cards purchases and gives extra power to your business intelligence.</p> <p>Overview API Documentation</p>	<p>BBVA SPAIN <b>BBVA Connect</b></p> <p>Connect enables BBVA Clients to give y our app their consent to access BBVA s erVICES in their name.</p> <p>Overview API Documentation</p>	<p>BBVA SPAIN <b>Identity</b></p> <p>BBVA Identity allows authenticated users to recover key profile data to enhance engagement levels.</p> <p>Overview API Documentation</p>	<p>BBVA SPAIN <b>Accounts</b></p> <p>Accounts allows pre-authorized users to access key account data for enhanced financial management services.</p> <p>Overview API Documentation</p>
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# 4 Banks and banking groups will need to decide on the market approach across the European market

## Possible scope



 Required directly by PSD 2 as top priority

## Possible strategies and examples

### Market & cluster specific approaches

Current situation, e.g. all countries have different rates, conditions and specification of term deposits (incl. EUR deposits)

### Joint approach, but executed on local level

E.g. agreement on the central level about rates for EUR term deposits

### Act as one

E.g. decision about having one bank as deposit collector for the entire group on centrally agreed rates (within Eurozone)



# 5 Additional revenue can be derived both within the current business model as well as with tapping into new revenue streams

## Innovations in current business model

- Selling **additional products** by leveraging new customer data
  - e.g. theft insurance triggered by certain purchases, such as jewellery
  - e.g. travel insurance triggered by location based data, such as proximity to country border or airport

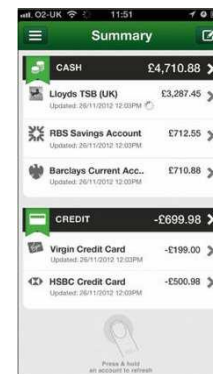


**Aegon car insurance (HU):**  
pay per minute

## Reinventing business model

- **Leveraging data of other banks** (through AISP) to personalize offer and propose own slightly better products
- Selling **products of competitors** (other banks, FinTechs etc.) in own channels
  - Digital channels
  - Potentially also offline channels e.g. branches

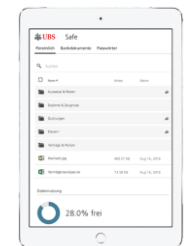
**OnTrees (UK):**  
account aggregator



## Non-traditional revenue streams

- **Financial viability** services (confirming client's financial viability/reliability to third parties, e.g. renting/leasing)
- Digital **marketing** (third party marketing to customers)
- **Clean digital documents organizer** for keeping important documents safe from passport copy to high-school diploma to birth certificate to mortgage and insurance papers, tax filings

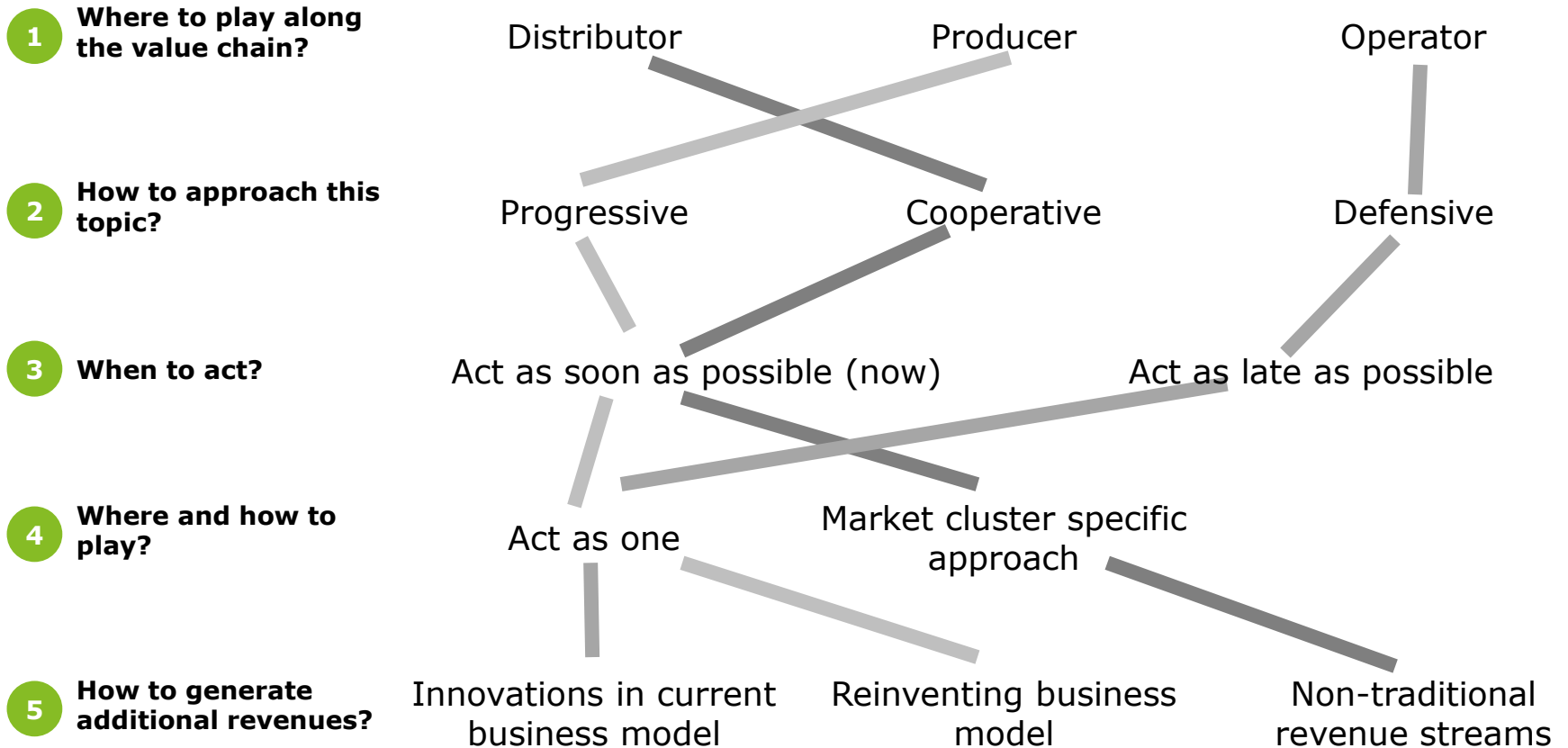
**UBS document vault (CH)**



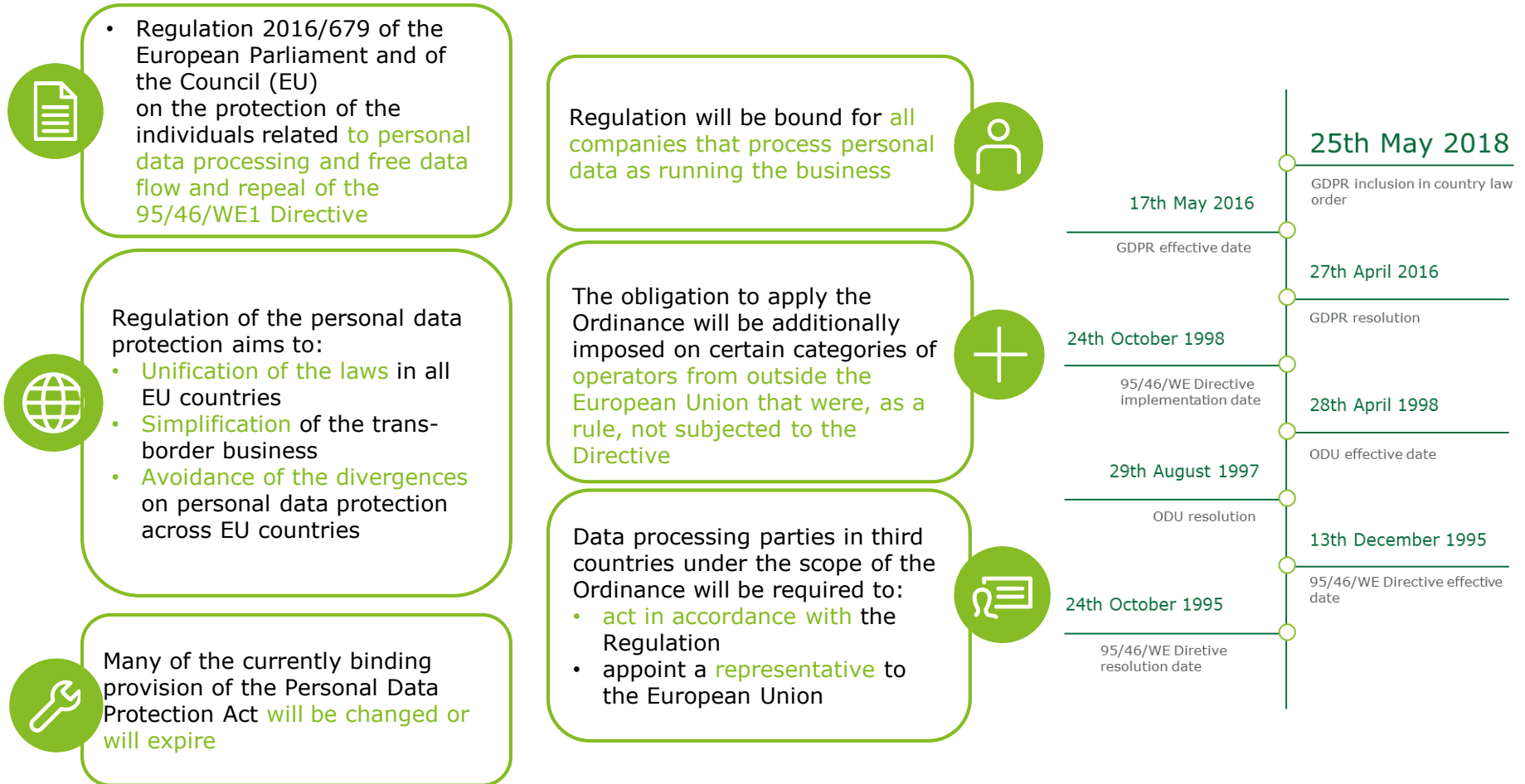
# What are the strategic decisions of your Institution?

## Question

## Answers



# General Data Protection Regulation (GDPR) is bringing a revolution in the scope of obligations for those companies that store and process personal data



# GDPR introduces obligation to provide evidences for being compliant against a number of principles



## LAW COMPLIANCE PRINCIPLE

- The Ordinance includes a defined conditions catalogue stating when data processing is law-abiding
- Each data processing instance must be based on at least one legal basis (listed in the Ordinance)
- The change to the organization is mainly the necessity to adjust acquiring data processing consent to the new regulations



## RELIABILITY AND REGULARITY PRINCIPLE

- The data administrator is obliged to prove that data collected is correct and up-to-date and the collection process is not interfered
- The administrator is obliged to implement technical and organizational measures enabling data correction, mistake risk mitigation and incorrect data removal
- Inclusion of the right to be forgotten and the right of data transfer



## LIMITED PURPOSE PRINCIPLE

- The principle states that the data collection purpose need to be defined, clear and legally justified and cannot be met by using other means
- Data processing purpose needs to be defined at the collection stage
- New data processing purpose requires acquiring a new consent
- The administrator is obliged to communicate the data processing purpose to the person subjected to the process

# The GDPR principles make an impact not only on business processes but also IT architecture



## DATA MINIMIZATION PRINCIPLE

- The scope of data acquired must be adequate and minimized according to the objective it has been gathered.
- Data minimization means the data selection is strictly related to the activity it has been gathered and the data storage timeframe is limited
- In practice data minimization rule requires that business purpose and the related data types along with data review and removal timeframes must be precisely defined prior to physical data collection and processing



## INTEGRITY AND CONFIDENTIALITY PRINCIPLE

- The obligation to process the data in a manner that ensures proper security standards that meet pseudonymization and anonymization requirements
- Integrity principle obliges to ensure the data has not been modified, removed, added or destroyed without required consent
- Confidentiality principle obliges to prevent instances when the data is shared or disclosed to unauthorized parties or processes



## ACCOUNTABILITY RULE

- The data administrator is obliged to prove, that the methods applied comply with the Ordinance and are effective
- It is required to apply respective procedures and keep diligent record
- Accountability principle strictly imposes notifying the supervisory authority in case of personal data usage violation



## TRANSPARENCY PRINCIPLE

- The Ordinance stipulates that all information communicated to natural person should be formulated in a simple and transparent manner. The recipient needs to understand the message. Consequently hermetic or overcomplicated message will not comply with the Ordinance

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