

RRDS 27: Core Sup/RegTech reporting infrastructure

Launching a multidisciplinary team to align top
down and bottom-up risk data infrastructures



17 June 2021

Round the table:

- ▶ **Firms:** Barclays, Barings, BMO, BNP, BNY Mellon, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, Intesa Sanpaolo, LBG, JP Morgan, Morgan Stanley, Natwest
- ▶ **Infrastructure:** Axiom, Bloomberg, Broadridge, Business Semantics, EY, IHS Markit, PwC, Vizor
- ▶ **Trade Associations:** ISDA, ISLA, EVIA, ICMA
- ▶ **Regulators:** Bank of England, Bank of Italy, BIS, ECB, FCA, Office of Financial Research
- ▶ **Accademia:** London School of Economics, University of Loughborough

Objectives:

- ▶ Discuss how well **risk and trade data challenges** are addressed by the RRDS Reg/SupTech core **reporting framework**
- ▶ Discuss the **EBA 430C consultation 11 June responses** in context of other data strategy efforts
- ▶ Solicit **your views** on **how the industry could help** the **authorities** to address the bigger **SupTech** challenges with the urgency required

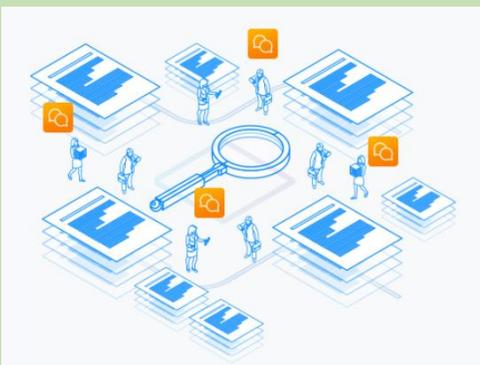
Rules of the road

- ▶ **Chatham House Rule** applies
- ▶ Please **introduce yourself** when speaking for the first time
- ▶ **No free rides** - this does not work if you let others do all the talking
- ▶ **Silence** = agreement
- ▶ All JWG RRDS members will receive a copy of the **minutes and presentation materials**

Thank you for keeping our trusted community thriving on-line!

JWVG's mission is to help FS **regain control** of global regulatory change by adopting a **technology-enabled, standardised** and **collaborative** approach

Industry Collaboration



Over 100 investment firms and tech companies in our 400 **special interest** and **working group** meetings since 2006

Independent, safe space



Hundreds of firms, regulators, vendors



Semantic Solutions



Launched the world's first **regulatory change** management system, **RegDelta** in 2014

12 years of NLP modelling



942 sources, 125 million words, 3day SLA

942 sources, 3 Day SLA



2020: 28,000 documents, 125 million words

Research & Events



Actively engaged in sector thought leadership with **firms, regulators, standards** bodies and **vendors** since 2009



130+ jurisdictions globally

with 4,400 monthly page views



10,000+ members

6 focused discussion groups

SupTech/ RegTech: Regulatory reporting

Collaboration

Regulatory reporting: Time for a Rethink?

- To obtain insight into how firms are reacting to continued pressure from the public sector for more transparency

The future of FS risk data collection with DRR

- To obtain insight into how firms and regulators will integrate new RegTech Digital Regulatory Reporting standards into their infrastructure

Real world deployment of DRR

- To push 'top down' and 'bottom-up reporting together
- To obtain insight into how firms and regulators deal with data quality control

SFTR DRR Brexit Transparency SFTR DRR EMIR OTC DRR UK DRR Intl plumbing EU/UK plumbing Transparency 2.0 UK DRR Global DRR Fx PoC BoE data collection CRR2 430C CPMI/IOSCO EU Digital Finance MiFID/R III transparency FRTB/CRRII

Month	Meeting Topic	Agenda	Leading Guests
11 March	BoE data collection findings and 2021 action plan	<ul style="list-style-type: none"> UK regulatory data collection findings (Jan paper) Forward plans, priorities and interdependencies Next steps for RRDS in 2021 	<ul style="list-style-type: none"> BoE
13 May	Do top down and bottom up meet?	<ul style="list-style-type: none"> CRR II CP and 430C feasibility study Interdependencies Roadmap conclusions 	<ul style="list-style-type: none"> ECB
17 June/	Transaction and risk DRR landscape: Core SupTech / RegTech semantic solutions	<ul style="list-style-type: none"> CPMI/IOSCO implementation plans, progress (CFTC, SEC SBSR, UK, Asia, etc.) EU MRER EMIR Refit and SFTR lessons learnt and update of SFTR Implementation synergies: MiFID III, CRR2, etc 	<ul style="list-style-type: none"> DRR EC/ ESMA EBA/ ECB
22 July	International, UK & EU Digital Finance reporting strategies	<ul style="list-style-type: none"> EU Digital Finance and DLT / Blockchain reporting feasibility (BIS here) UK digital strategy (pending regulatory framework review) UK operational resilience and DORA's impact on global FS data management practices (digital integrity summary here) 	<ul style="list-style-type: none"> HMT EC
Sept	MiFID/R 22 what is likely to change for EU trade & transaction reporting and is the UK likely to follow?	<ul style="list-style-type: none"> MiFIR CP responses consultation by 20 November 2020 Final review report to the European Commission in Q1 2021 EC report MiFID/R review by 31 July 21 Potential changes, UK/EU deltas, opportunities and implementation strategies New investment report with 109 data fields for 3rd country firms 	<ul style="list-style-type: none"> ESMA FCA FTC
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16 Nov	Annual RegTech Conference	<ul style="list-style-type: none"> YEAR SIX 	<ul style="list-style-type: none"> ALL



1. Reporting: strategies for 2050
2. Path forwards
3. Next steps

Reporting strategies (as of march 2020)

EU Fitness check on supervisory reporting requirements (11/19)

Making rules

- Legislative process and instruments
- Consultation process
- Stability of the requirements
- Relevance of reported data
- Implementation planning/timing

Reporting requirements

- Who reports what to whom
- Summary of statistics reporting requirements
- Single data hub

Data processing rules

- Single market for data
- Cross sector object connection
- Standards, tools & infrastructure

Reg Reporting (Digital Finance Strategy, Q3/20)

EU Cloud

- Capacity
- Concentration risk
- User rights to stay in control



RegTech engagement

- 2 - Firms' internal IT governance
- 3 - Supervisors' understanding of technology
- 9 - RegTech and SupTech

ROFIEG on reporting (12/20)

Machine Readable and Executable Reporting Requirements - Proof of Concept (PoC) Tender

BoE Data collection CP (01/20)

New model options

- Common data inputs
- Modernising reporting instructions
- Reporting architecture and governance



- Cost baseline
- Implementation paths
- Technical solutions

Viable paths

Semantic/ data fabric

- 10 - Standardisation of legal terminology and classification of actors, services, products and processes
- 11 - Human- and machine-readable legal and regulatory language
- 12 - Regulatory Clearing House
- 25 - GDPR and new applications of technology

FCA Data strategy (01/20)



Industry DRR viability assessment (01/20)

- Reg reporting suitability
- Data / API
- Existing standards
- Existing commercial software
- New software
- Rol/ scenario analysis



European Commission supervisory data strategy update

EU financial system – supervisory data strategy

Have your say > Published initiatives > EU financial system – supervisory data strategy

In preparation

Roadmap

Feedback period

18 May 2021 - 15 June 2021

FEEDBACK: CLOSED

UPCOMING

About this initiative

Summary

This strategy, announced in the Commission's digital finance strategy adopted in September 2020, aims to **improve the collection of supervisory data** (i.e. data reported to EU and national authorities for the supervision of the financial system) and make it fit for the future.

Better data collection will:

- help to ensure the integrity and stability of the EU's financial system by enabling proactive and effective data-driven supervision; and
- reduce the cost and burden associated with reporting.

Topic

Banking and financial services

The objectives of this initiative cannot be sufficiently achieved by Member States individually. Reporting requirements are already defined in EU legislation, and such rules are needed to give the relevant EU and national authorities the data they require to oversee the financial system and fulfil their mandates. **More efficient and effective data collection, which also includes greater data standardisation and data sharing, cannot be achieved by changes at national level. It requires EU action, taking account also of international efforts to enhance data standardisation and facilitate supervision at global level.** This initiative is about **strategy formulation**. Any legislative action to implement specific changes in the rules would be subject to further impact assessment, in line with Better Regulation principles.

B. What does the initiative aim to achieve and how

Building on the findings of the fitness check and in line with the **Commission's broader strategy on data and digital finance**, the aim of the supervisory data strategy is to **initiate a shift in the EU from the current system of supervisory reporting to a modern, efficient and effective approach to data collection for supervisory purposes**. The overall long-term objective is to have a data collection system that delivers accurate, comparable, and timely data to supervisory authorities at EU and national level, while minimising the aggregate reporting costs and burden for all parties. **The supervisory data strategy will consider a number of co-ordinated sectoral and horizontal measures that contribute to the overall objective of improving and modernising supervisory data collection, which will likely be implemented over a number of years.** The former may include the development of common data templates and provisions to facilitate data sharing, rectifying inconsistent empowerments to the ESAs in defining reporting requirements at technical level, mandating the reporting of common identifiers, providing or clarifying specific definitions and scope of reporting, and strengthening proportionality in sectoral reporting frameworks. **Horizontal measures considered will focus on developing a common data dictionary (i.e. a repository of information about the data, including its meaning, relationships to other data, origin, usage, and format), enhancing data sharing and access, and improving the overall design of reporting requirements in EU legislation.** Improving supervisory data collection requires greater integration of existing reporting frameworks, the objectives of which differ significantly across the financial sector and which are based on different data flows between the national and EU levels. It will require the strong commitment and coordination of multiple independent authorities. Moreover, redesigning reporting and data collection processes implies an upfront investment of resources (human and financial), and may require changes to legacy systems and tools in which the reporting entities and supervisors invested in the past. The strategy therefore needs to follow an approach that balances the level of integration, sectoral specificities, and the pace of implementation, taking account of the associated benefits and costs. This initiative aims to set out the overall vision, principles, and approach to improving data collection and making it fit for the future, also working together with the relevant stakeholders at EU and national level.

Article 430c: Feasibility report on the integrated reporting system

Main content:

1. EBA shall prepare a **report on feasibility** regarding the development of a consistent and integrated system for collecting statistical data, resolution data and prudential data and report its **findings to the Commission** by 28 June 2020.
2. When drafting the feasibility report, EBA shall involve competent authorities, as well as authorities that are responsible for deposit guarantee schemes, resolution and in particular the ESCB. The report shall take into account the previous work of the ESCB regarding integrated data collections and shall be based on an overall cost and benefit analysis including as a minimum:
 - a) an overview of the **quantity and scope of the current data collected** by the competent authorities in their jurisdiction and of its origins and granularity;
 - b) the establishment of a **standard dictionary of the data** to be collected, in order to increase the convergence of reporting requirements as regards regular reporting obligations, and to avoid unnecessary queries;
 - c) the establishment of a **joint committee**, including as a minimum EBA and the ESCB, for the development and implementation of the integrated reporting system;
 - d) the feasibility and **possible design of a central data collection point** for the **integrated reporting system** including requirements to ensure strict confidentiality of the data collected, strong authentication and management of access rights to the system and cybersecurity, which:

430C
Is also about
reducing
complication

Source: <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/101541>

Situation

- ▶ **Problem:** need for a new financial risk information system design
- ▶ **Context:** Current approaches (e.g., 430C, IREF) patching the current system
- ▶ **Solution:** Develop specifications and design a path to “endgame state” in a multi-disciplinary team

Complication

- ▶ Business semantics and data requirements are foreign topics, not readily understood by policy makers
- ▶ Complexity and (largely unnecessary) complication drive Technogenous risk
- ▶ Regulation must foster system sustainability (e.g., reduce complication and avoidable complexity)
- ▶ Global dialogue moving too slowly and narrowly vs. the speed and depth of technological progress

Next steps to resolution

1. ✓ EBA consultation response. **Industry to respond to June 11 consultation** to demand bolder, longer term exploration considering technological evolution which is socialised to a broad set of stakeholders
2. Risk reporting task force. **Solicit volunteers** to help propose actions to frame the quest of 430C in a wider context, including discussion of adoption strategies on the RRDS July agenda (**22 July**)
3. Paper and plan. Create a multidisciplinary discussion on **a fresh look at the broader frame for SupTech** starting in **September 2021** with the aim of creating a **paper by December** which looks at the broader SupTech challenges and sets priorities for 2022

Source: JWG RRDS 26 meeting minutes

Problem statement

Key messages: An integrated Reg/SupTech platform for European reporting is required

1. A new approach to data acquisition is required. An integrated European reporting framework is **fundamental to the fulfilment of Supervisory mandates in a digital age**. Insights gained from a shared, common view of risk data across the industry will enable regulators to perform their job in the timeframes required while enabling the industry to **innovate** more effectively and achieve **better outcomes** for consumers.
2. There is a clear strategic path forwards. **Simplification**, reducing complication is **immediately feasible** and should be the **initial strategic focus of an integrated framework**.
3. Building shared compliance infrastructure is a first step. An initial focus of a simplification programme should be on **data standardisation** and shared **infrastructure** to **enable rules for automated compliance** to be developed **collaboratively** and immediately increase data quality levels, reduce costs and operational risks.
4. Digital-age regulation includes language. The digitalization of finance will also require the sector to expand our concept of **technology to include language**. Indeed, once language leaves the realm of human discretion to enter the world of connected machines, rigour (mathematical clarity) and discipline (hard standardisation) become necessary for the network of machines to work well and safely, also as it grows and accelerates.
5. Investment in public goods is required alongside risk and market regulation. **Global, public-good data infrastructures** (e.g. LEI), **Common glossaries** (e.g., BIRD) and **agreed semantic standards for authoring rules** (e.g., [SBVR](#)) should thus be treated as technology that matters for the consistency of the technology layer, and as solutions to alleviate a main source of technogenous risk (i.e. risk generated purely by the use of technology we allow in the markets).

Opportunities

- ▶ Improve existing 'propeller plane' controls - subsonic
- ▶ Prepare supersonic: jet engines, as propeller planes won't do
- ▶ Head off systemic risks: new measurement tools in a system made measurable
- ▶ Connect disparate data activities and harness the power of industry collaboration

Threats

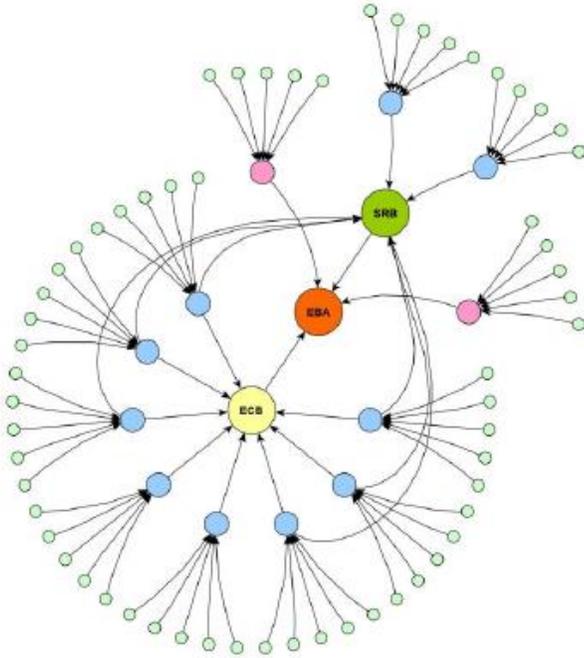
- ▶ Unmanageable complexity and complication
- ▶ A tightly coupled, global system regulated by siloed institutions
- ▶ Fast, sudden, unforeseeable events; slow legislative process
- ▶ Volumes, speed & complexity beyond human capacity
- ▶ This issue is beyond the scope of most trusted advisory services

Source: JWG EBA 430C discussion paper response

Solution: a new SupTech/RegTech core for risk information

Today's distributed data architecture

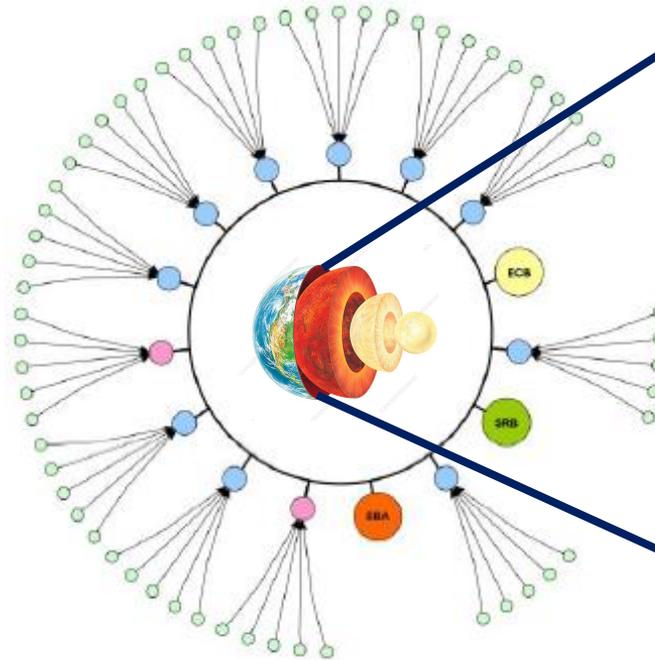
Figure 14: Sequential integration



- ▶ Difficult to align **reporting obligations** to a **business events**
- ▶ **Humans struggle** to specify rules to **machines**
- ▶ Little integration **between** the reporting **obligations**
- ▶ No link between **operational data and regulatory reporting**
- ▶ No common **reference data**

Future state compliance infrastructure

Figure 16: Service-bus integration



New Reg/SupTech core to link contract and machine views of economic activity

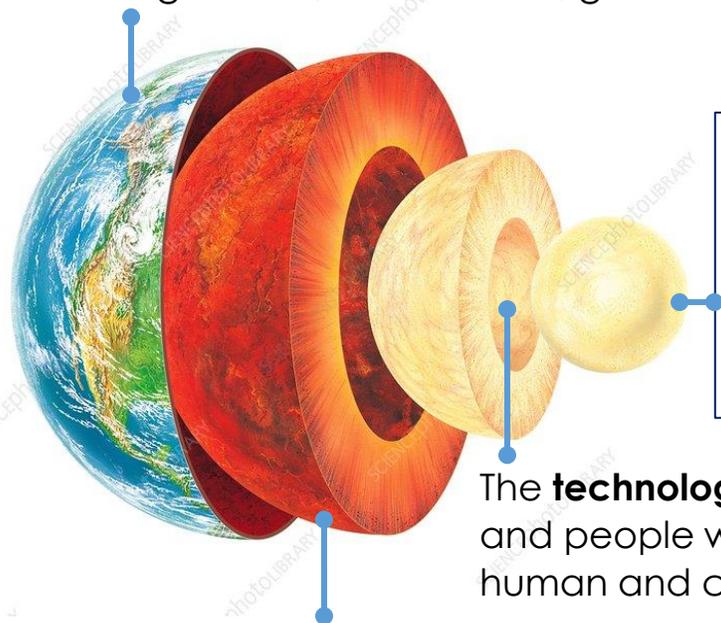
- ▶ Business glossary linked to reporting requirements
- ▶ Reporting rule standards (approach & disambiguation)
- ▶ Data structure + glossary definitions + Validated test packs
- ▶ Common reference data sources

- ▶ The **measurement-and-analytics chain** must be automated for **speed**; parts of it must perform real-time, global
- ▶ Macro-pictures, analysis and simulations should be built **straight-through from granular, operational data**
- ▶ The **same data** must serve **operations and measurement**, by public and private parties alike
- ▶ globally standardised operational data stored in **large-scale infrastructures** seems a necessary, ultimate condition
- ▶ Hard **standardisation through infrastructure**: one fact, one representation only, accurate real time, used by all.

Defining a SupTech/RegTech reporting core

RegTech/ SupTech infrastructure

The **human layer**, where the “economic game” between actors is played, transactions, prices, terms and agreements are negotiated, work is done, goods and services produced, exchanged and consumed.



RegTech/ SupTech reporting core platform focus

- ▶ Create overarching design, theory and plan
- ▶ Define target architectures:
 - Business glossary linked to reporting requirements
 - Reporting rule + language + technology standards (approach, disambiguation, APIs, etc.)
 - Data structure + glossary definitions + Validated test packs
- ▶ Establish and build out common reference data and identifiers

The **technology layer** is where information is recorded and managed by connected machines and people who fill technical roles which machines cannot perform (yet). It needs to bring the human and contract layer together in a way that is observable by supervisors.

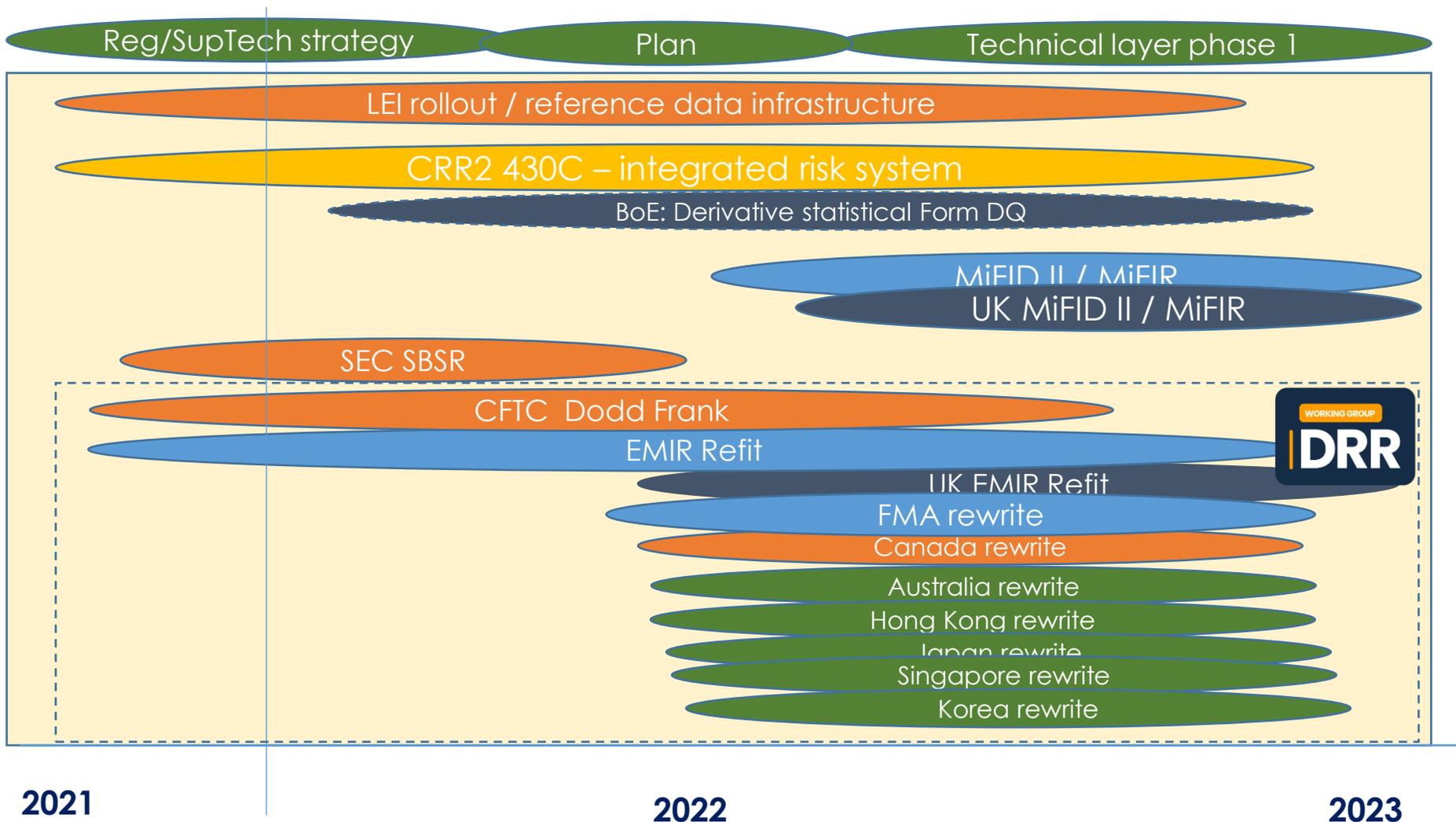
The **contract layer**, where agreements among people are recorded as contracts, validated by the law of a sovereign, executed and judged when disputed by people and institutions. This layer is the actual technical substance of the economy.

Independent, safe space must be created between the many trade bodies, regulatory agencies, standards bodies, technology and data providers and financial institutions involved to align deliverables and timelines

1. Reporting: strategies for 2050
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The prize: aligned and fully functional efforts

Forward top-down bottom-up data integration plan

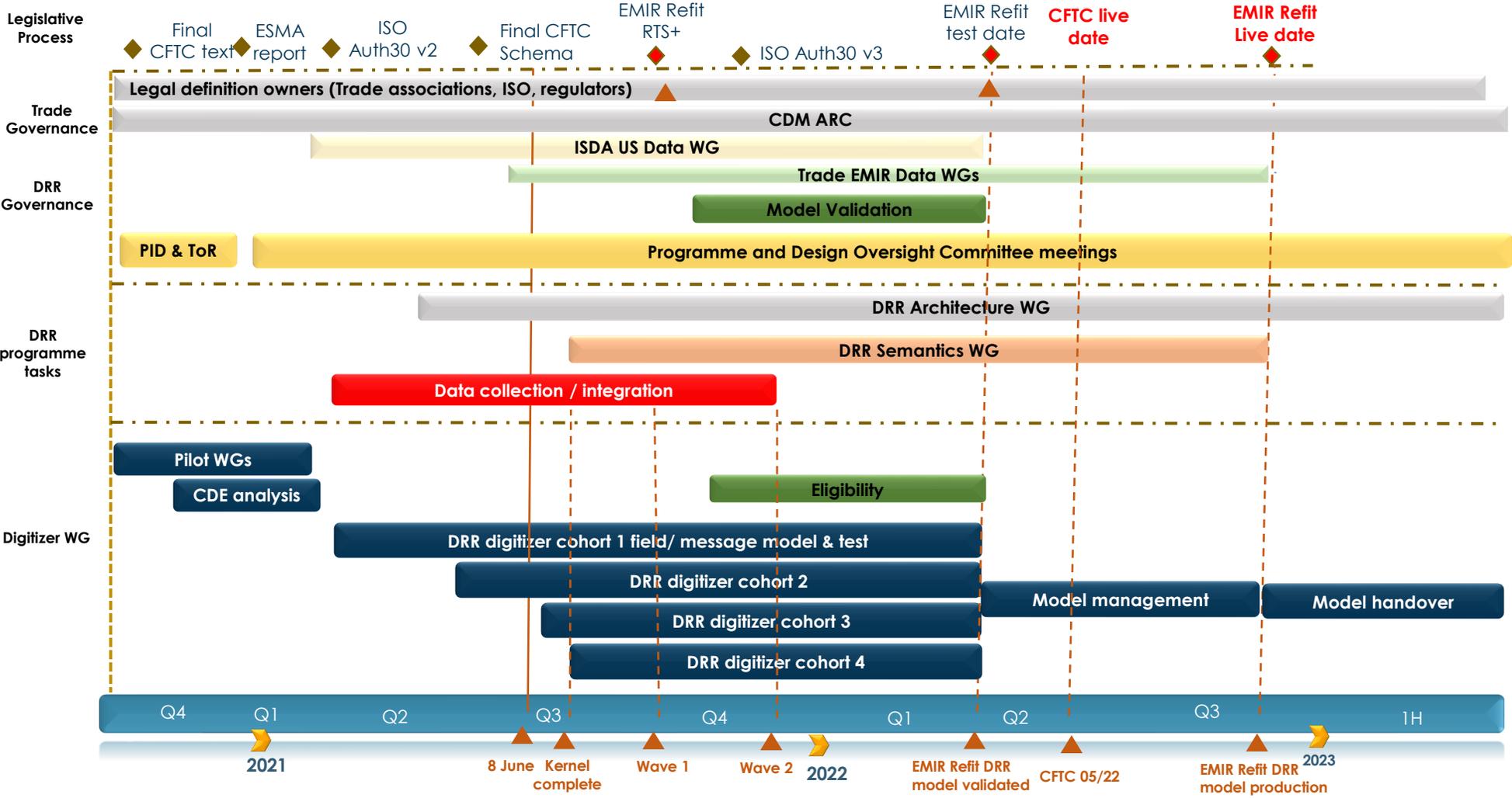


Opportunities

- ▶ Harness current data efforts
- ▶ Link pieces and create synergies
- ▶ Increase efficiency and data integrity

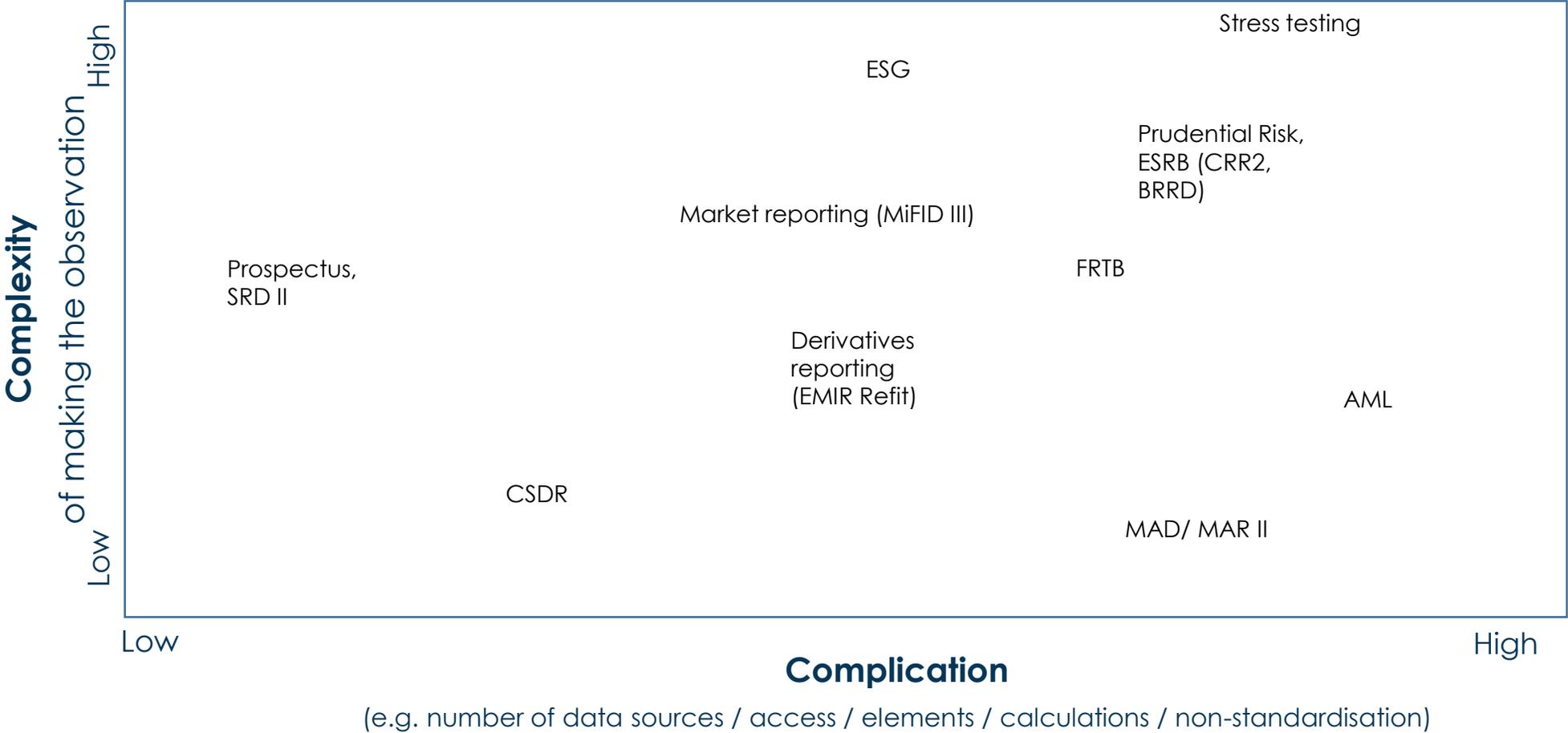
Cross-sectoral programme alignment example

Global Derivatives DRR Programme Plan Overview – 8 June



Complexity and Complication: dimensions of the data challenge

The economy is an inherently **complex system**. Globalization, science and human creativity increase complexity even further. The way we use **technology has added complication**. Complexity and complication combine into the challenge we must address.

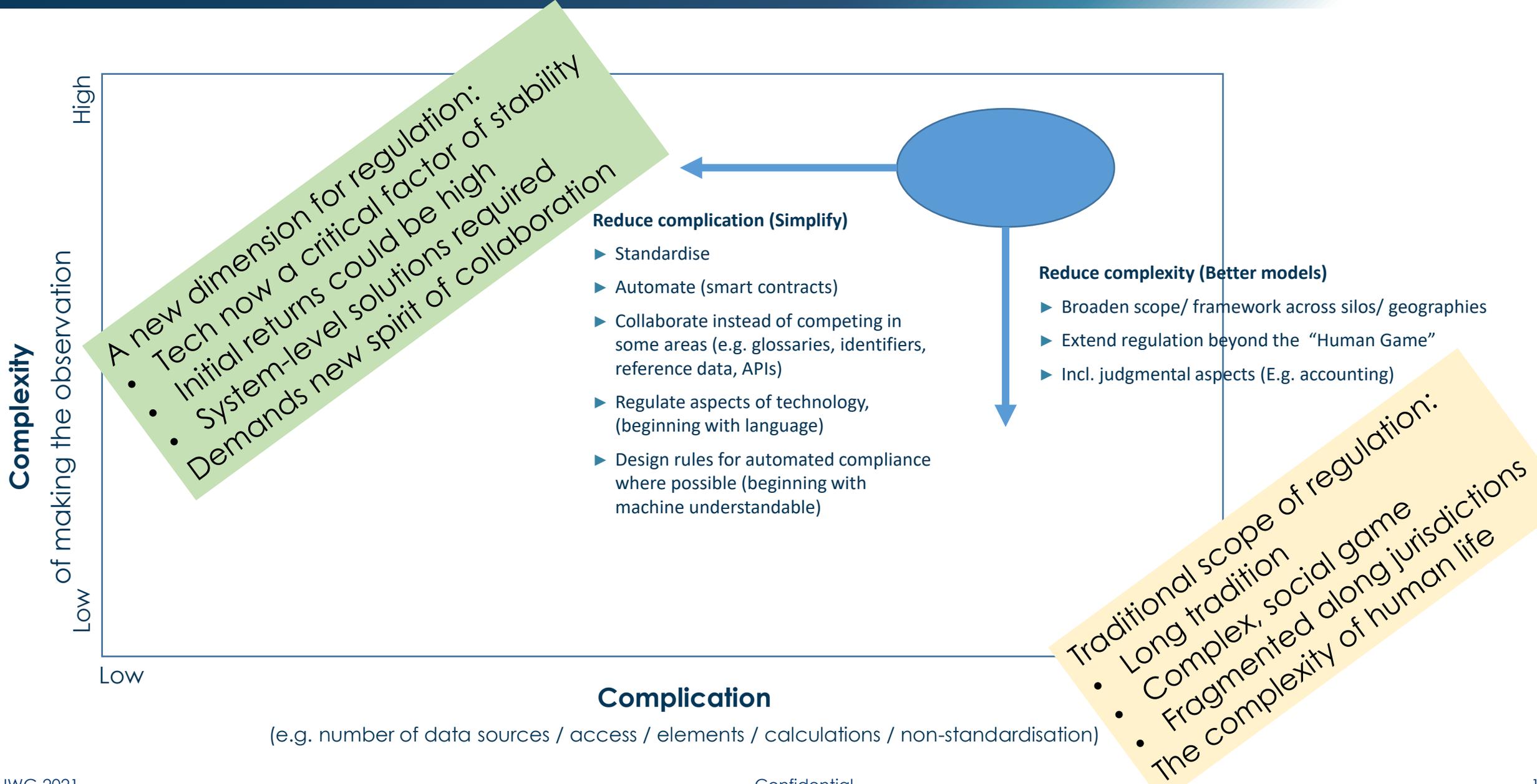


Complexity: the extent of uncertainty and human discretion in data derivation (e.g. accounting, valuation, model risk)

Complication: a securitisation investor report is the deterministic result of individual loan data but requires many inputs and computational steps, made more complicated when the many sources use diverse representations of **the same** facts.

Simplification: reducing complication and avoidable complexity increases the chances of mastering unavoidable complexity at the speed required for safety.

New dimensions for regulatory improvement?



Goal: stability of a global, tightly coupled, fast, complex system controlled by a fragmented institutional landscape

- ▶ Reconcile the **global nature of the economic system** with the **local** nature of societal **organisation**
- ▶ Control demands **measurement** and analysis at the **scale** and **speed** of real-time global events
- ▶ Designed-in, **inherent stability** keeps the system away from turbulence and reduces demands on active control
- ▶ All institutions able to **cooperate** on facing global surprises, working with **timely, consistent representations of the system**

Design strategy

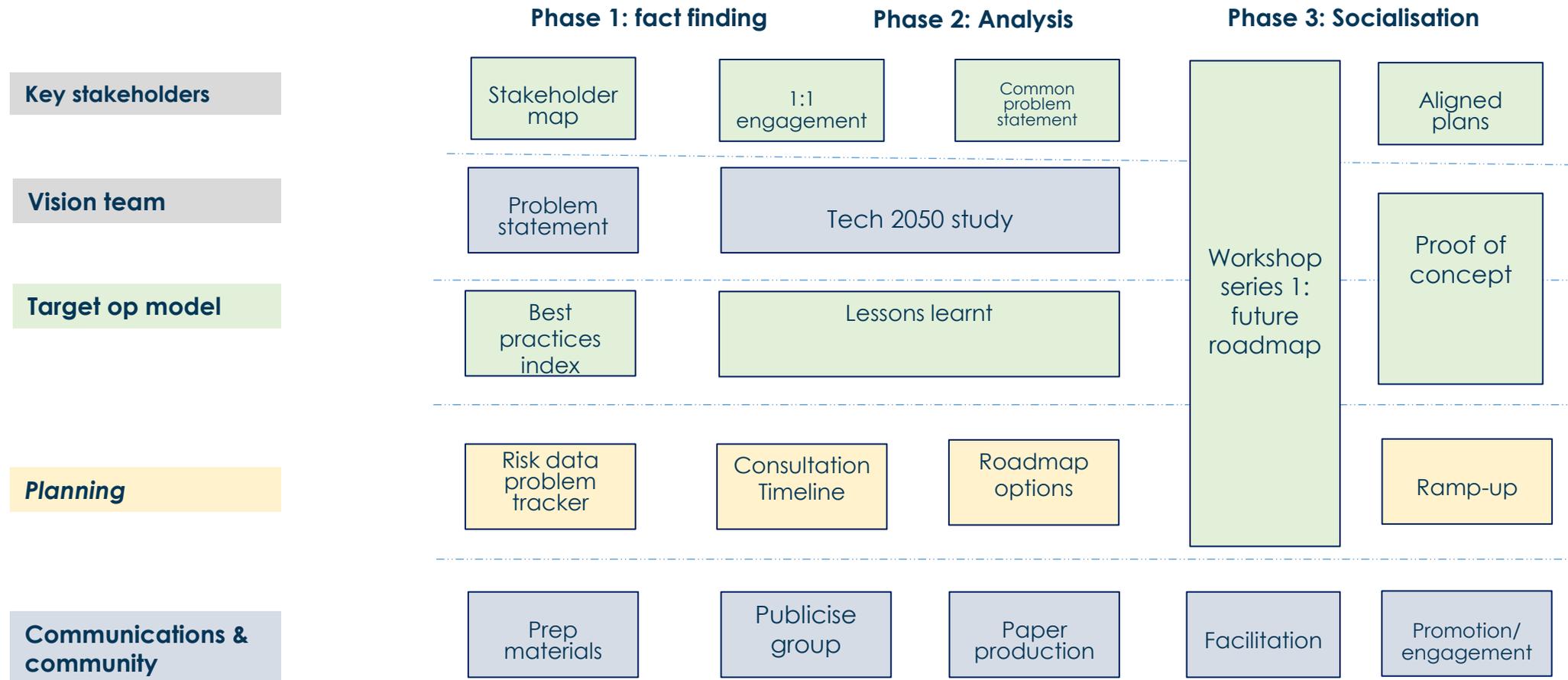
- ▶ Strategic **horizon must be 30-40 years**: time to design, agree, build solutions while running, plus effective useful life
- ▶ Conceptual design: run a **thought experiment** on “**Tech 2050+**”-scenarios (“x100”) and **invariants** (contracts, parties...)
- ▶ Design **possible migration paths**: driven by economic forces, framed and catalysed by political and regulatory action
- ▶ Identify **initial steps** with transformational power – benefits for all, learning experience, ideas and demand for more

Specifications

- ▶ The **measurement-and-analytics chain** must be automated for **speed**; parts of it must perform real-time, global
- ▶ Macro-pictures, analysis and simulations should be built **straight-through from granular, operational data**
- ▶ The **same data** must serve **operations and measurement**, by public and private parties alike
- ▶ globally standardised operational data stored in **large-scale infrastructures** seems a necessary, ultimate condition
- ▶ Hard **standardisation through infrastructure**: one fact, one representation only, accurate real time, used by all

A potential approach

EU SupTech/RegTech core development PERT Chart - DRAFT



A more ambitious effort than what has been established so far is required

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Next steps

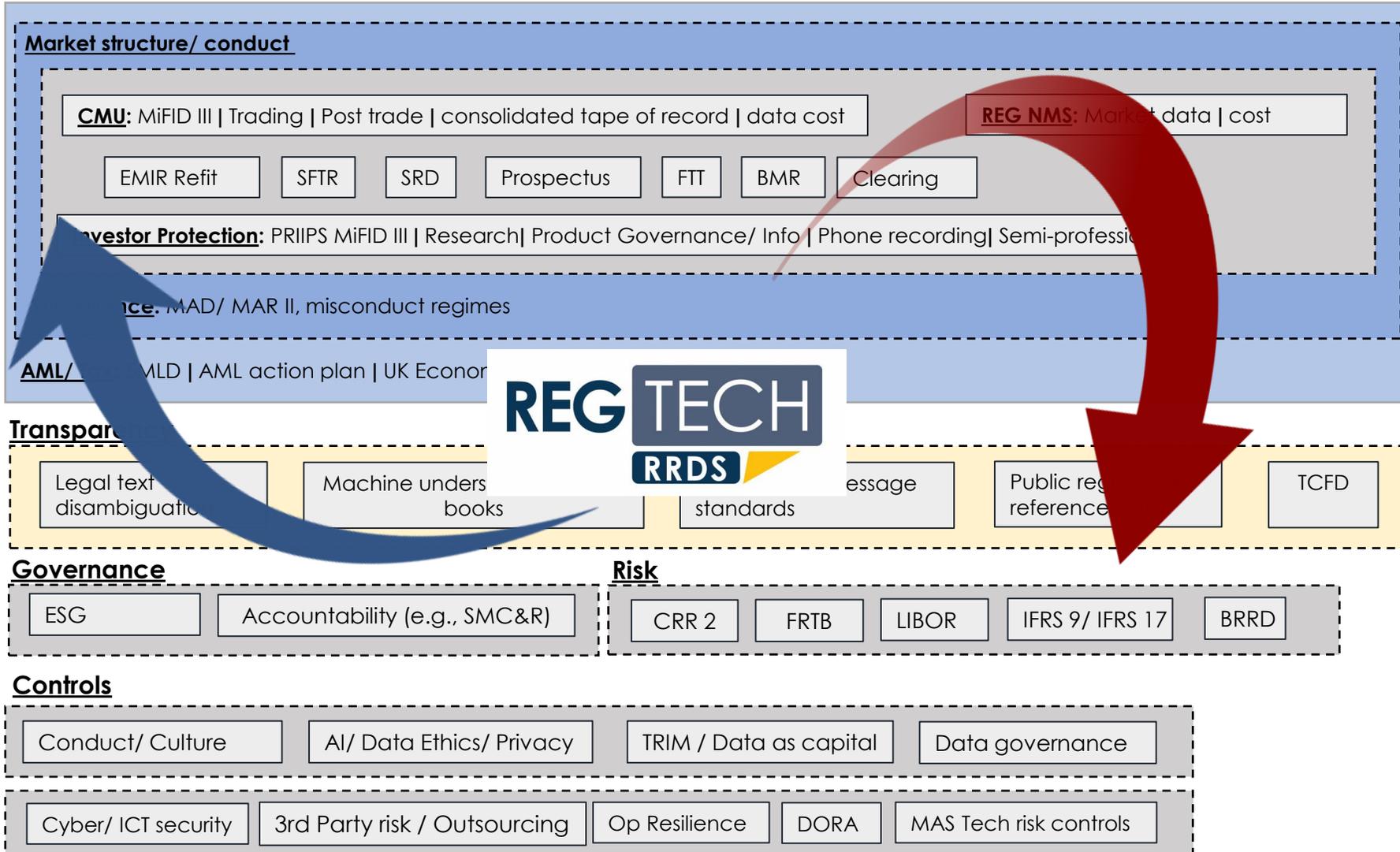
Next steps

1. EBA consultation response. **Industry to respond to June 11 consultation** to demand bolder, longer term exploration considering technological evolution which is socialised to a broad set of stakeholders
 - 1. Socialise JWG response
 - 2. Examine other public responses (e.g., 14 responses submitted 14 June to EC supervisory data strategy)
 - 3. Identify other key stakeholders
2. Risk reporting task force. **Solicit volunteers** to help propose actions to frame the quest of 430C in a wider context, including discussion of adoption strategies on the RRDS July agenda (**22 July**)
 - 1. 1:1 phase 1 plan inputs
 - 2. 22 July meeting participation to shape ToR
 - 3. Alignment to Q4 timing for inputs/ outputs
3. Paper and plan. Create a multidisciplinary discussion on **a fresh look at the broader frame for SupTech** starting in **September** 2021 with the aim of creating a **paper by December** which looks at the broader SupTech challenges and sets priorities for 2022
 - 1. Tech 2050 team launch and targets
 - 2. Workshop invitations and dates
 - 3. Plan and participants



JWG Global Regulatory Agenda in 2021

Political re-alignment (e.g., post Brexit)



Market effectiveness

Surveillance

Customer & system protection

Transparency 2.0

Digital supply chains

Accountability and automated controls

Digital integrity

Digital Finance

Crypto Assets

Crypto Currencies

CBDC

De FI

LEI



RRDS 2021 Agenda

SupTech/ RegTech: Regulatory reporting

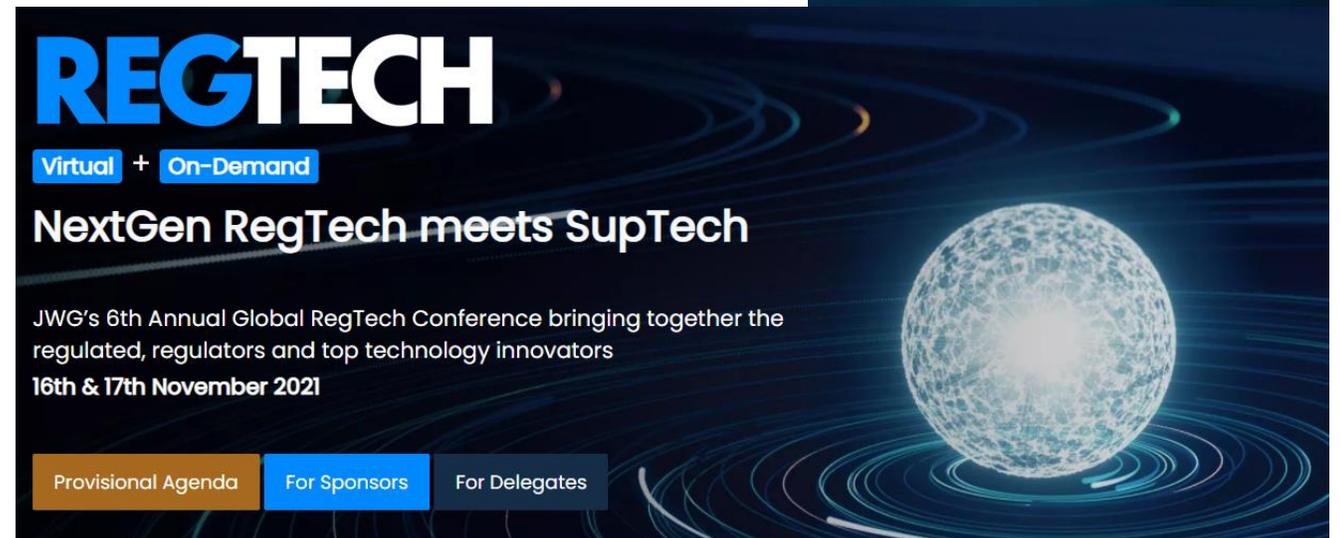
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Next steps

- ▶ 22 July – JWG RRDS 28
- ▶ JWG DRR Q2 update [here](#)
- ▶ Membership & 16/17 Nov Conference: Corrina.stokes@jwg-it.eu
- ▶ RegTech hubs: register on www.jwg-it.eu
- ▶ RegCast: register [here](#)



REGTECH
Virtual + On-Demand
NextGen RegTech meets SupTech

JWG's 6th Annual Global RegTech Conference bringing together the regulated, regulators and top technology innovators
16th & 17th November 2021

Provisional Agenda For Sponsors For Delegates

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