

Preparing for catastrophic events

Using data, technology, and machine intelligence
to better mitigate and manage risk

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Welcome to the new “dynamically-changing normal”: 2020 catastrophes so far are already crippling our economies and societies

Australian wildfires:

+72k square miles of land were burned, +34 dead, \$1.3 billion USD in insured claims

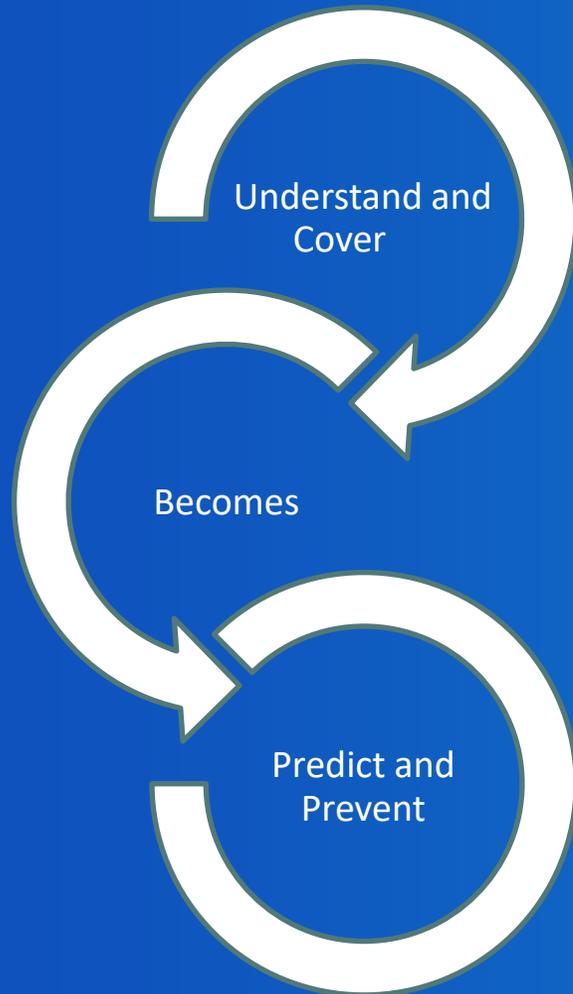
COVID-19 global pandemic: So far +5 million cases in 213 countries, 350k dead, and expected business interruption losses of USD 4trn

Cyclone Amphan: So far, thousands injured, 120 killed, +200k infrastructure losses, 120k trees destroyed

U.S. civil unrest: Riots have now spread to 140 cities across the U.S., likely to lead to increased business interruption claims on top of COVID-19

No one can comprehensively manage these risks. Our efforts must focus on risk prevention & mitigation.

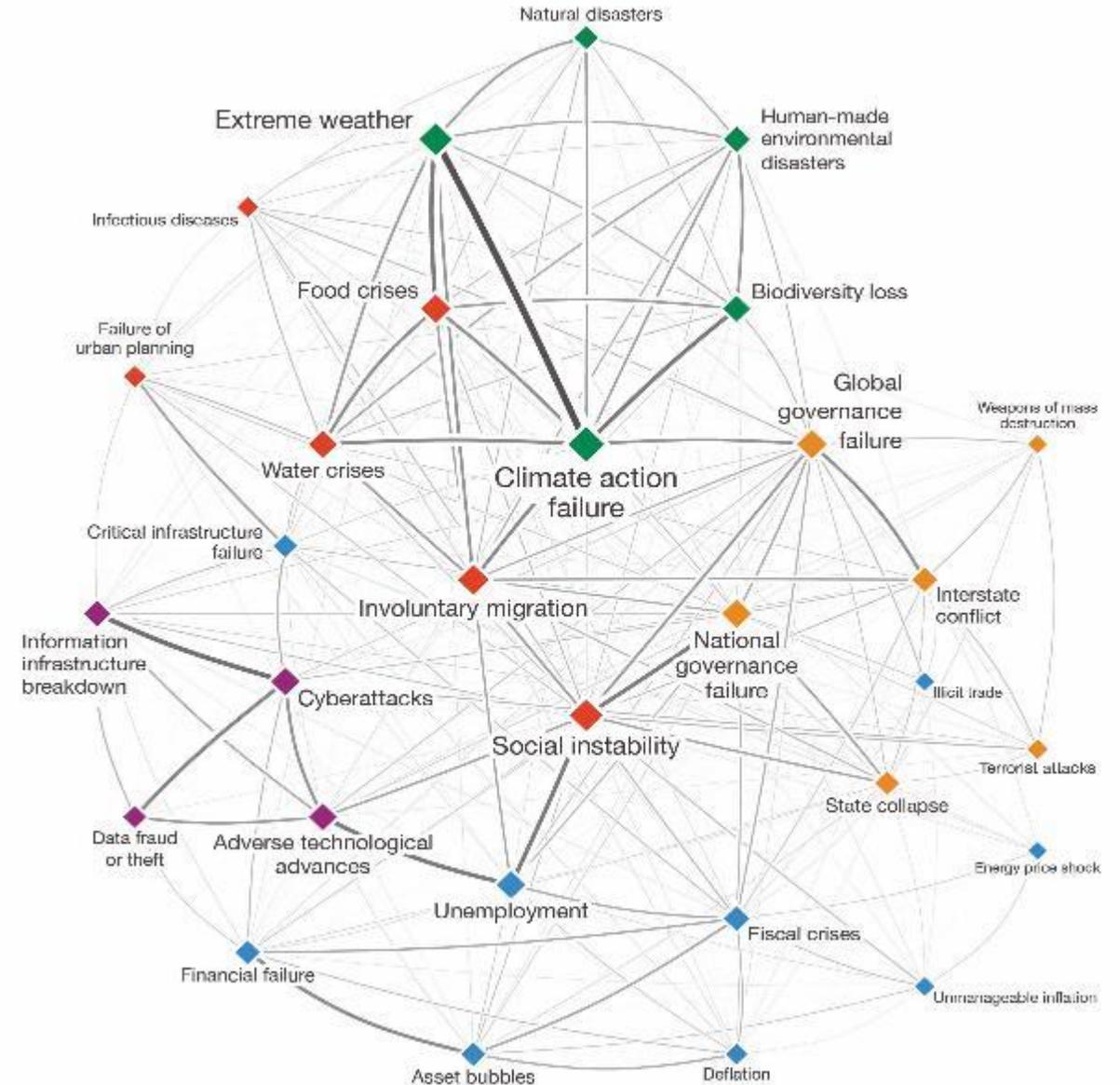
Shifts in the insurance industry



Prevention, risk management, & innovative covers for 360° protection

These complex, interconnected risks are accumulating and propagating. We need new approaches and tools.

Data-driven, machine-intelligence-enhanced solutions allow us to predict and prevent risks and deliver resilience-as-a-service solutions.



Technology for resilience

R&D efforts to unlock potential



Transition to a digital society where Machine Intelligence & humans are living together



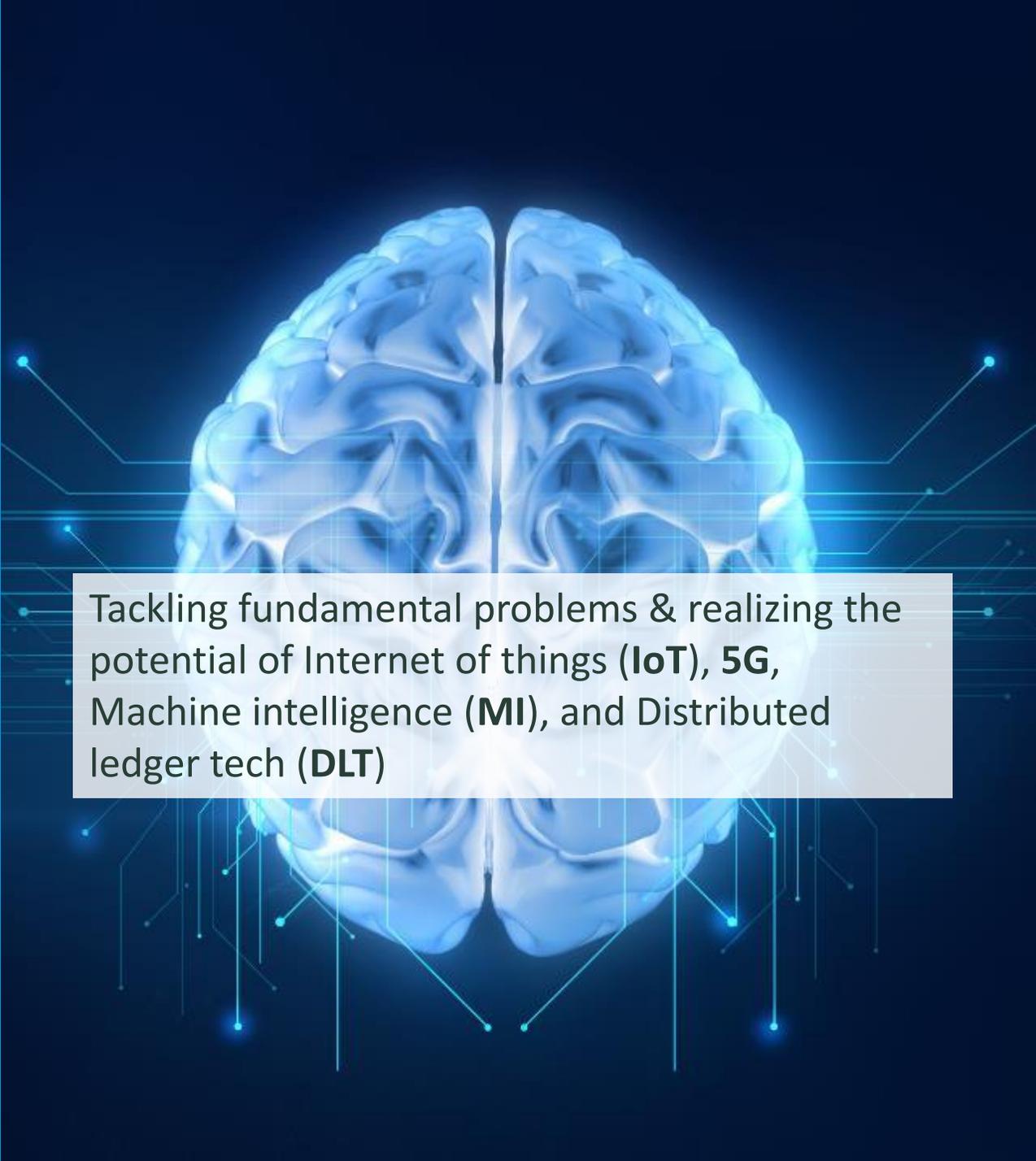
Global trading & supply chain digitization
The raise of IoT & DLT



Living longer with precision medicine and democratization of diagnostics from Labs to Wearables



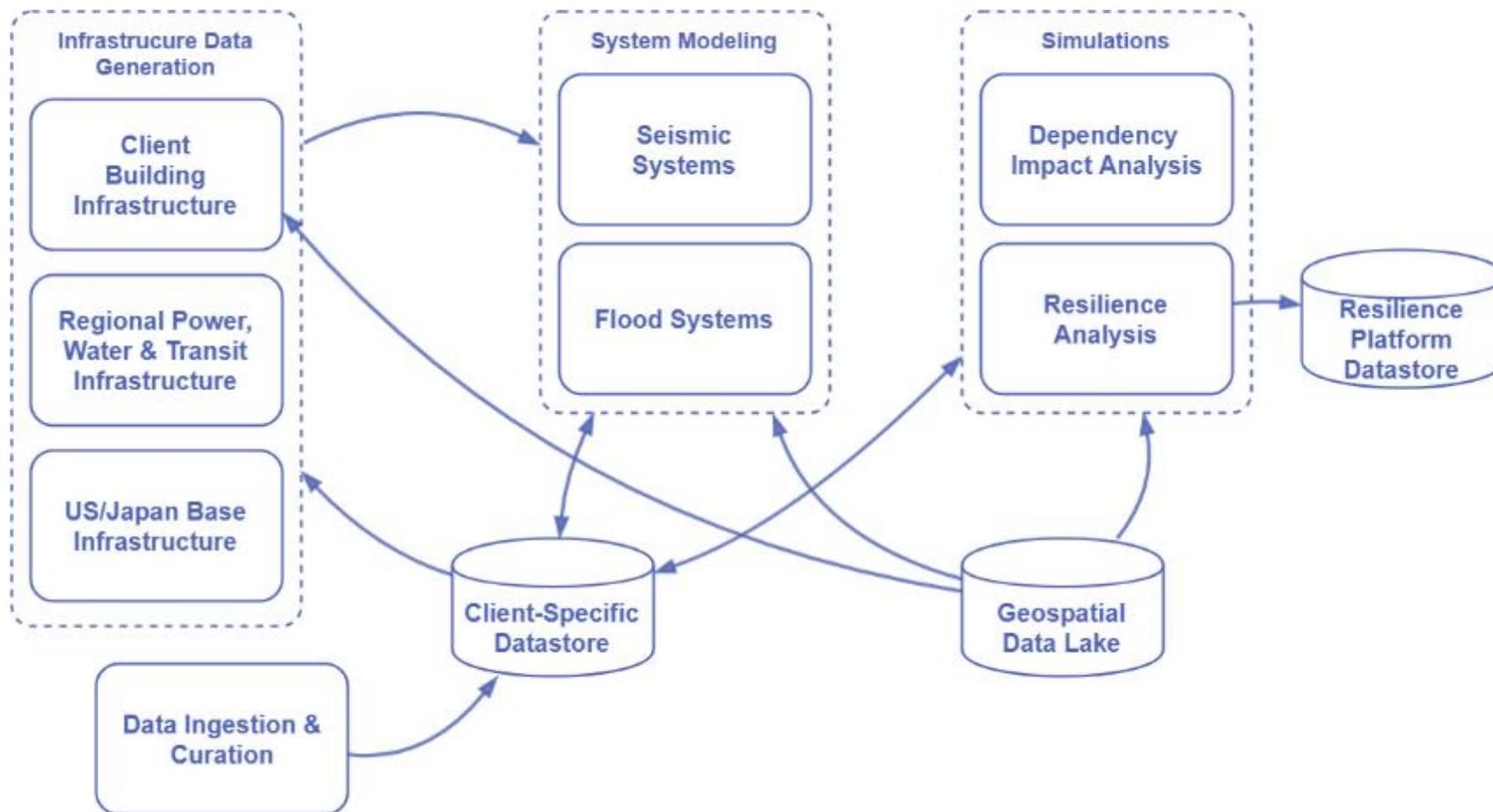
Climate change & Natural assets
Making resilience & sustainability compatible with economic development



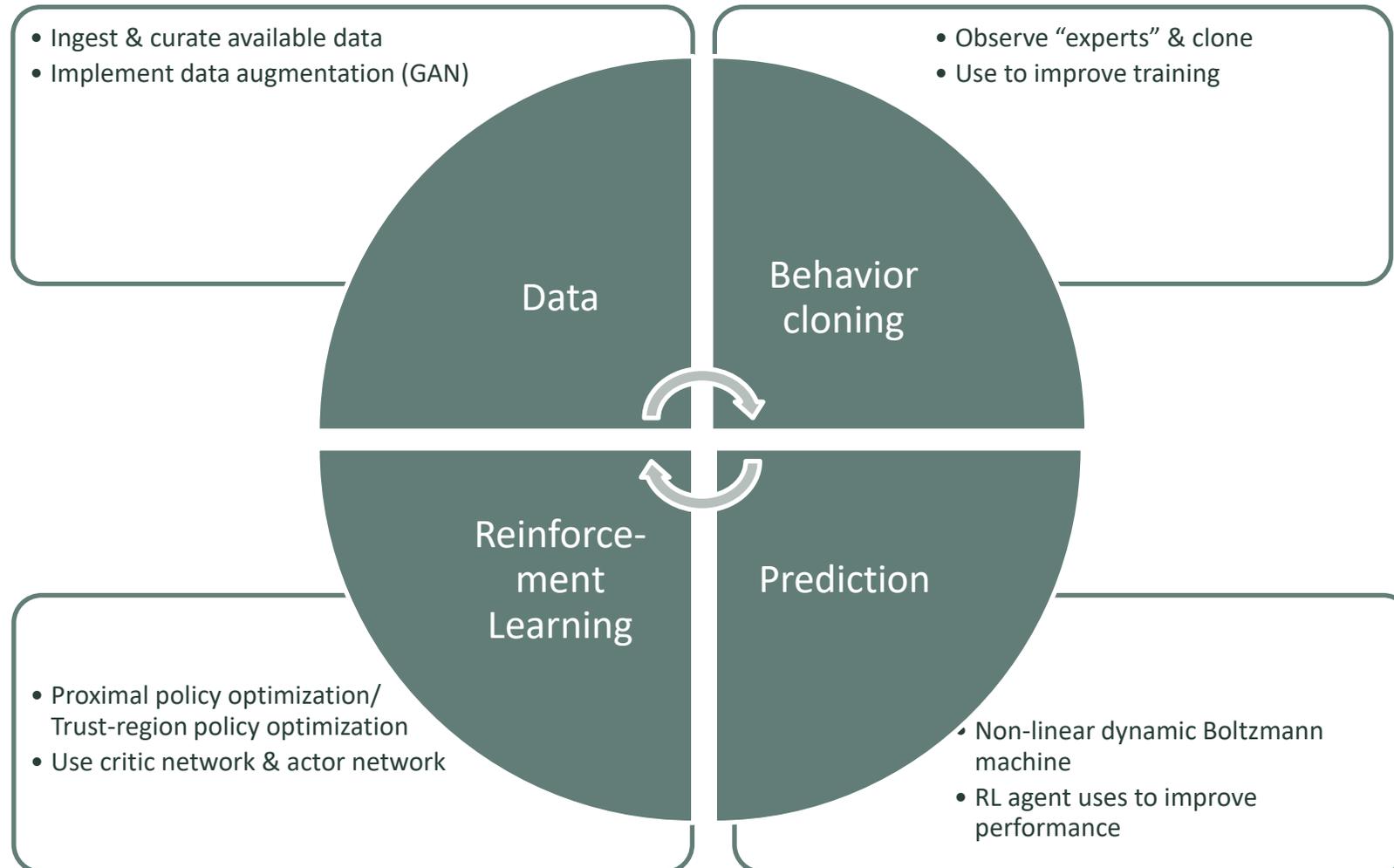
Tackling fundamental problems & realizing the potential of Internet of things (IoT), 5G, Machine intelligence (MI), and Distributed ledger tech (DLT)

Resilience modeling:

Using hybridized physics-based models & machine learning



Better prediction & portfolio optimization: Integrating data, subject-matter-expertise, and new machine intelligence



Resilience-as-a-Service solutions powered by Swiss Re Institute's Risk Intelligence Factory™

Enriching curated data with risk knowledge to deliver next-generation resilience solutions



Case study: The impact of COVID-19 on supply chains

Before COVID-19: Global supply chain transformation was already underway as key technology trends converge



IoT devices & machine intelligence drive new **insights** toward end to end visibility



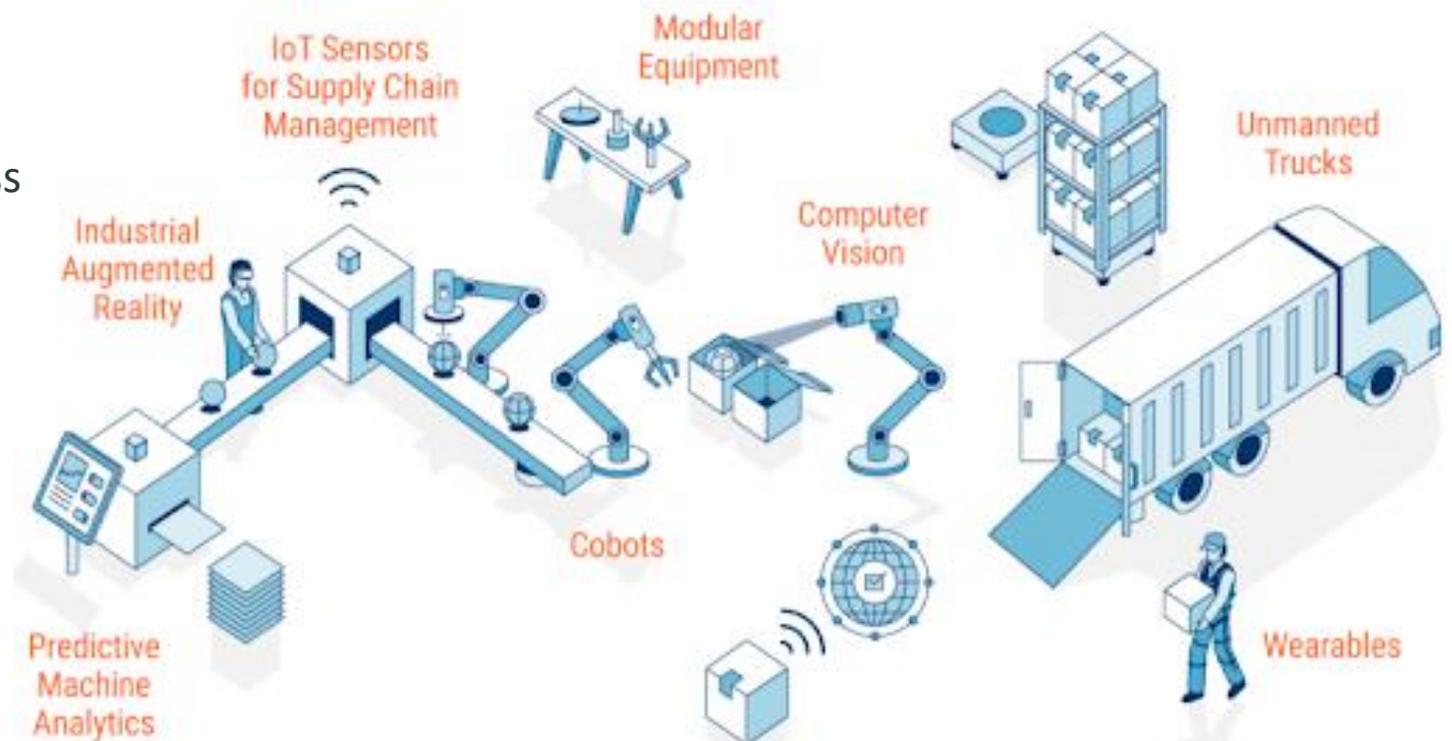
Digital ecosystems facilitate access to **digital twins** at points of need



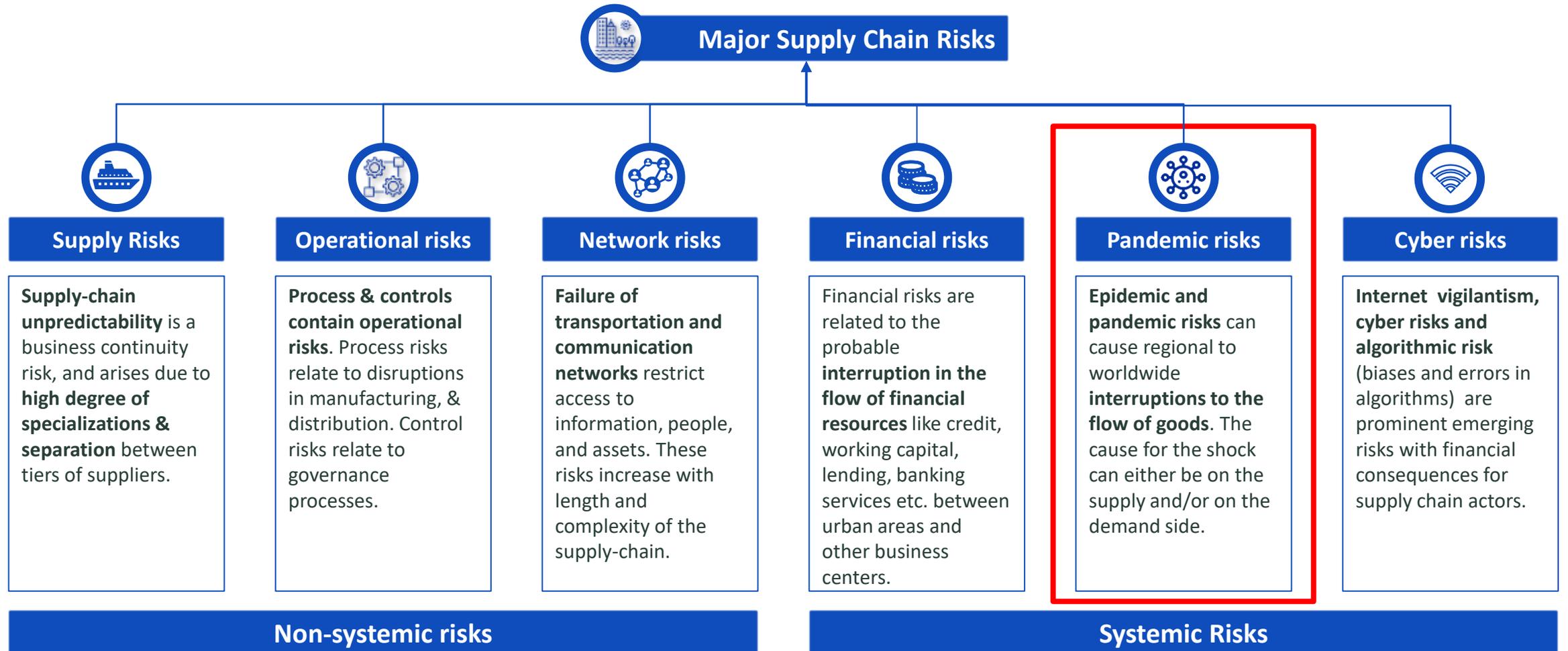
DLT & confidential computing enable **trust** among layers of **counterparties**



Parametric insurance & resilience/risk-mgt-as-a-service create new ways to close the insurance protection gap



COVID-19 pandemic risk highlights new nature of systemic risks: Data-driven risk monitoring facilitates tracking of systemic and non-systemic supply chain risks



Post COVID-19 supply chains: Demand for resilience and risk transfer solutions is expected to rise

Monitoring tier dependencies

- OEMs will engage with n-tier suppliers to monitor exact sources of every material. Additional sources for important supplies will need to be found to mitigate supply chain risks.



Insurance at the point of need

- New risk awareness will lead to demand for new insurance products. Coverages could be parametric & include:
 - **Delay protection**
 - **Transit interruption protection**
 - **Political risk protection**

Geographical diversification

- **Localization** vs **Globalization** debate has entered into a new era
- **Reducing heavy dependencies** on one geography for supplies is a key priority for CxOs

Supplier diversification

- Avoid reliance on single source suppliers

Swiss Re Institute solutions:

Supporting ICMIF for sustainable economies & societies

Future-proof your business

Performance

Profitably steer portfolios to best manage risks and unlock capital for better performance and growth

Exposure

Reduce the volatility in your underwriting portfolios caused by unforeseen (but foreseeable) risks. Identify key risk drivers and accumulation potential to best manage exposures

Regulation

Comply with growing financial regulations on disclosures, capital reserve requirements and increasing demands for corporate accountability for risks

Sustainability solutions: Roadmap for long-term profitable growth

Example: Climate SDG-related solutions

3

Climate business impact:

Make your business impact Paris-compatible, safeguard your reputation, comply with regulation. Use the insurance SDG calculator to measure impact progress.



4

Sustainable long-term growth:

Future-proof your business and meet SDG and performance goals with Swiss Re's comprehensive sustainability solutions suite of products and services



2

Climate portfolio resilience: Ensure your property is safe, your liabilities are well managed, and your assets are maximized, across all climate scenarios. Use the insurance SDG calculator to set measure exposure progress.



1

Setting objectives & partnership terms:

Kickoff meeting to agree on objectives. Use the insurance SDG calculator to set baseline / index.



Introducing Swiss Re Institute's insurance SDG calculator

Scoring your performance against SDGs relevant to your business



The insurance SDG score will enable you to benchmark yourself against ICMIF members and the insurance industry, quantify your exposures and impact, and credibly report on your progress towards the SDGs

Introducing Swiss Re Institute's Sphere: Supporting ICMIF in expanding insurability, increasing relevance with prevention services & optimized covers

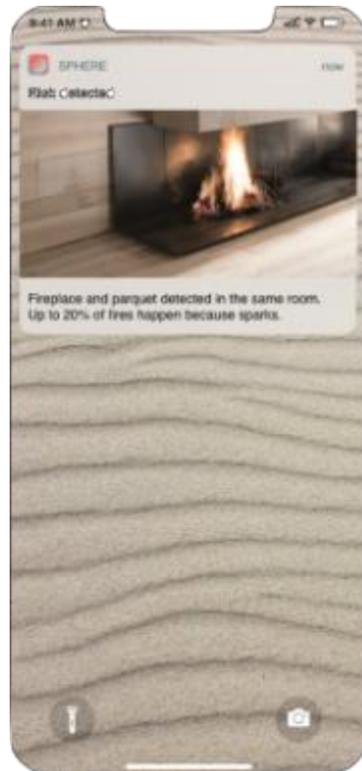
Insurance protection

User centricity

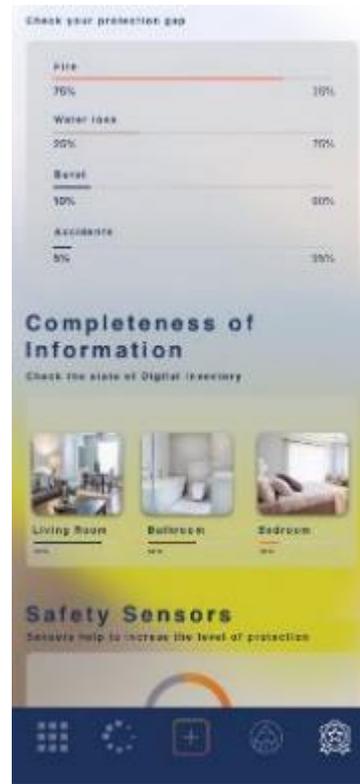
Automatic Claim



Risk prevention



Quoting



Improve protection



Value added services



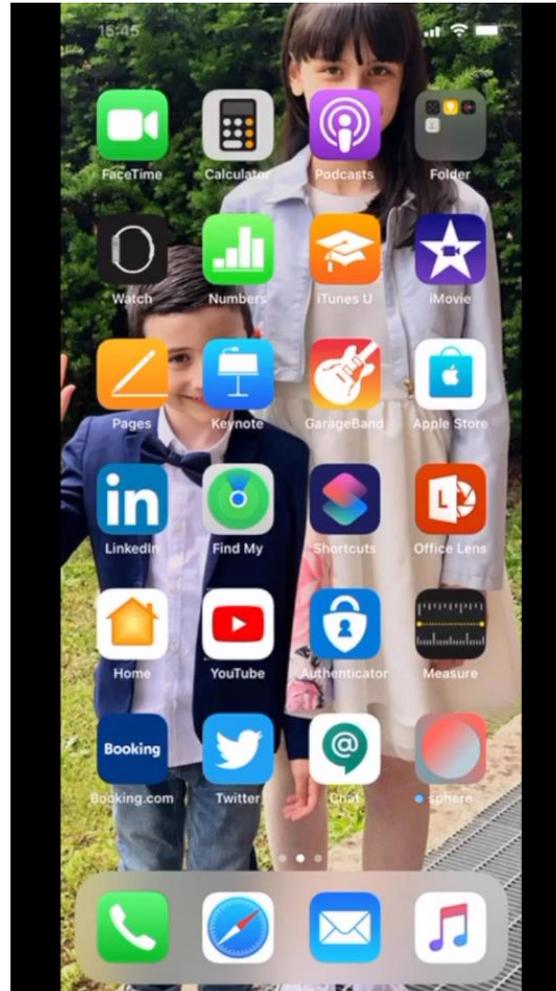
Get rewards



Redefining user experience: Swiss Re Institute's Sphere brings fun, simple, fast risk acquisition, automated claims, and value added services

Engaged, safe policyholders:

- **Fast, simple and fun:** Sphere enables fast risk acquisition, quoting, and payments
- **Boosting user engagement and increased touchpoints:** Value added services and notifications keep you connected with policyholders and help mitigate risks



Relevant, optimized products:

- **Sphere index'** proprietary scoring model compares a user's house topology with the topology expected for the specific market segment, enabling the right covers and personalized services for each policyholder
- **Easy to integrate:** Sphere can be seamlessly integrated into your mobile application of choice

Resilience-as-a-Service: Swiss Re Institute's new data-driven offerings

✓ Risk products and services

- ✓ Risk scores & indexes
- ✓ Structuring risk transfer mechanisms
- ✓ Data Services
- ✓ Solvency services
- ✓ End-to-end risk platforms
- ✓ Real-time supply chain track & trace services



✓ Risk analytics

- ✓ Predictive risk analysis
- ✓ Real-time NatCat monitoring / early warning systems
- ✓ Risk management tools
- ✓ Risk Intelligence Factory™



✓ Risk studies

- ✓ Feasibility studies
- ✓ Economics of Climate Adaptation (ECA) & climate impact studies
- ✓ Risk outlook studies





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