THE ROLE OF EMERGING TECHNOLOGY IN RISK MANAGEMENT

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COMPANIES ARE LARGELY DEPENDENT ON THE INTERNET FOR BUSINESS GROWTH; IN FIVE YEARS, AVERAGE TARGETED GROWTH DEPENDENT ON THE INTERNET WILL DOUBLE.

90% rank business growth through internet-enabled initiatives in their top three strategic priorities

77% of businesses became largely dependent on the internet over the past 10 years

Average targeted growth dependent on the Internet economy (%)

- Next year: 19%
- Next three years: 26%
- Next five years: 34%

Base = Total sample; n=100
WHICH MEANS.....

Every transaction will become digital.

And in order to benefit from this growth, 
92% say a trustworthy internet economy is very or extremely critical to their organization’s future growth.

Technology is now front and center of every organization and indeed has taken over much of our daily lives.

As everything becomes digital, 
trust and user experience will become critical to success.
KEY TECHNOLOGY TRENDS

- HUMAN CENTRIC & PERSONALIZATION
- SEAMLESS USER EXPERIENCE
- SECURITY & PRIVACY, REGULATIONS
- BLOCKCHAIN IS THE DISRUPTOR
- SELF MANAGED DIGITAL IDENTITY
- AUGMENTED REALITY
- IOT, AI & ROBOTS
- BIOMETRIC IS EVERYWHERE
**KEY EMERGING TECHNOLOGIES STATS**

**87%** Solutions involving Digital Identity, Blockchain, and AI are promising with regard to their potential to reduce cybersecurity issues

Top 5 technologies companies have adopted or are planning to adopt in the next 2 years

- **Artificial Intelligence (AI)**: 39% already adopted, 53% planning to adopt
- **Internet of Things (IOT) and Industrial Internet of Things (IIOT)**: 32% already adopted, 60% planning to adopt
- **Smart/Connected Devices**: 33% already adopted, 60% planning to adopt
- **Blockchain/Distributed Ledgers**: 42% already adopted, 48% planning to adopt
- **Extended Reality (Augmented Reality, Virtual Reality)**: 46% already adopted, 40% planning to adopt

**93% agree:**
An ambitious emerging technology agenda demands a trustworthy internet economy.
THE MAIN BENEFITS OF BLOCKCHAIN ARE SECURITY, SPEED AND TRACEABILITY. THE MAJORITY BELIEVE IT IS ALREADY HELPING WITH INTERNET SECURITY.

Advantages of blockchain technology? (Top three)

- Increase security: 70%
- Increase speed: 58%
- Real-time track and trace: 50%
- Reduce costs: 39%
- Single source of truth: 30%
- Smart contracts and automation: 28%
- Distributed architecture: 25%

Percent of infrastructure expected to be on blockchain by 2030 (average)

- 44%

Blockchain as a part of the solution to network/internet security

- Yes, it is helping already: 53%
- Yes, but it is still in development and not yet mature enough (currently lacking technological maturity): 46%
- I don't understand enough about blockchain to really know: 1%

Q42, Q44, Q43

Base = Total sample; n=100
WE ESTIMATE >30% OF A BUSINESS'S COST BASE IS LOCKED UP IN DATA MESSAGING AND QUALITY ISSUES

Source: [https://www.visionetsystems.com/blog/tear-down-those-silos/](https://www.visionetsystems.com/blog/tear-down-those-silos/)
**BLOCKCHAIN = BUSINESS TRANSFORMATION**

**TRADITIONAL DATA SYSTEMS**

- “Can you send me what I need?”
- “Here’s what I know, what do you know?”
- “How can we align?”
- “Did you receive it?”
- “Is it right?”

**SHARED DATA SYSTEMS**

- “I see what you see”
FOUR KEY FEATURES CREATE THE CONFIDENCE

PROVENANCE
We know where it came from and can trace its' complete history

TAMPER EVIDENCE
We know if someone has tried to change it

CONTROL
We can control what someone can see and do at a data element level

SECURITY
We can encrypt and segregate data at a data element level
Emerging blockchain use cases

- Instant Claims Disbursements
- Property insurance
- Reinsurance
- Industry Fraud Utility
- Subrogation Industry Utility
- Peer to Peer Insurance
- Warranty Registration & Validation
- Car insurance
DECENTRALIZED IDENTITY:
KNOWN TRAVELLER DIGITAL IDENTITY
IDENTITY & RISK MANAGEMENT?

$12 bn
Estimated expense to achieve worldwide identification by 2020
Source: Project ID2020 documentation, 2017

21
Different digital identity instances per person (on average)
Source: FinTechStage Festival, 2018

20 bn
Connected “things” by 2020 with consumer applications to represent 63% of IoT applications
Source: Gartner Newsroom, 2017

The global multi-factor authentication services market is expected to grow at a CAGR of close to 23% from 2017 to 2021 up to $14.2 bn
Source: Businesswire

130
Average number of security breaches each year
Source: 2017 Cost of Cyber Crime Study – Accenture, 2017

+91%
Percentage increase over last five years

1.9 bn
Usernames and passwords exposed via data breaches and traded on black-market forums between Mar 16 – Mar 17
Source: Google, 2017

Identity theft
69%
of all data breach incidents, with over 600 million records impacted resulting in a 73% increase from 2016
Source: Gemalto, 2018

$141
Average cost for each lost or stolen record containing sensitive and confidential information
Source: IBM, 2018
EVERY TRANSACTION STARTS WITH AN IDENTITY

- The need for an identity both in the digital and physical world from getting access to essential services to accessing social media.
- Identity verification touches almost every industry from people to supply chain.
- A more trustworthy identity means a more trusted transaction and thus lower risk

<table>
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<tr>
<th>People</th>
<th>Private Sector</th>
<th>Public Sector</th>
<th>Connected Devices</th>
<th>‘Things’</th>
<th>Virtual entities</th>
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<tr>
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<td>Banking &amp; insurance e.g. KYC</td>
<td>Getting an ID e.g. driving license</td>
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<tr>
<td>Healthcare services</td>
<td>Making payments</td>
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</table>
WHAT IS IDENTITY?

It makes something or someone the same today as it, she, or he was yesterday.

Physical identity was designed to enable face-to-face transactions among entities.¹

Digital identity enables transactions in the digital world and offers improved functionality for its user.²

Emerging topics and advancements in digital technology, AI, robotics, automation will require new thinking.
A VERIFIABLE AND TRUSTABLE DIGITAL IDENTITY IS BECOMING ESSENTIAL IN OUR DAILY LIFE

**PHYSICAL IDENTITY**
- Designed for face-to-face transactions
- Trust based on visual documents/person

**DIGITAL IDENTITY**
- Digital identity is acknowledgement by trusted parties of our existence in the digital world
- Have the rights & permissions to transact

Trust is based on face-to-face interaction

...No face-to-face trust

You can see me, so you can trust me

I am real and I exist

Without a trusted identity in a digital world, we would struggle to transact, access services, and be acknowledged that we are who we claim to be
BLOCKCHAIN ENABLES DECENTRALIZED IDENTITY THROUGH **TRUST**

- **Secure**
  Data is cryptographically secure – sensitive data can be locked down

- **Tamper-Evident**
  Built-in mechanisms to verify data has not been changed – information cannot be altered

- **Distributed**
  Participants have access to the same data – real-time updates and information
OPPORTUNITIES FOR INSURANCE

Capabilities such as RPA, Blockchain, Digital ID, AI, Biometrics could help to reduce risks and augment existing risk management capabilities

- New business models and ways of sharing risks
- New role for the insurance market?
- More accurate, higher quality data
- Enabling greater trust where it did not exist before
- Greater trust in data, identities, and transactions
- Greater transparency and auditability
- Better user experience and trust-building with customer
- Efficiency gains through sharing and automation

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RISKS & CONSIDERATIONS

AI & Machine Learning - Ethics

Technology led, not value led

Blockchain – Security is still essential

Digital ID – privacy and security, and choice

Speed of change in technology & lock in

User experience

Interoperability
WHAT DOES THIS MEAN FOR INSURANCE?

Consider the new role and potential new products - insuring against risks for corporates to share data?

Insurance is critical to enable partnerships & new ecosystem for data sharing and organizations to take risks

Be prepared for disruptions and new partnerships
THANK YOU