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Industry Research on the Digitalisation of Financial Services

Banc Ceannais na hÉireann
Central Bank of Ireland

Eurosystem

Contents

Introduction/Background

The Central Bank of Ireland (Central Bank) issued a survey to regulated firms seeking information on the new and innovative products and services that have been offered or are in development in the Irish market for consumers in the digital financial services context. This survey was undertaken in order to inform the content of the Central Bank's Discussion Paper (DP7) on the *Consumer Protection Code and the Digitalisation of Financial Services*.

The main objectives of the research were to identify:

- Innovative solutions that firms have introduced to traditional processes to date;

- Product areas impacted for each innovative solution introduced to traditional processes to date;

- Innovative solutions that firms are planning on introducing to traditional business processes in the next 12 months;

- High level details for each innovation related initiative adopted to date, or innovations which will be in development in the next 12 months; and

- High level details of firms' innovation hubs.

Methodology

This research was conducted by way of an online web-based survey of 21 regulated firms, representing the main players, across five sectors as follows:

- Banking Industry;

- Insurance Industry;

- Investment Firms;

- Payment/E-Money Institutions; and

- Retail Intermediaries.
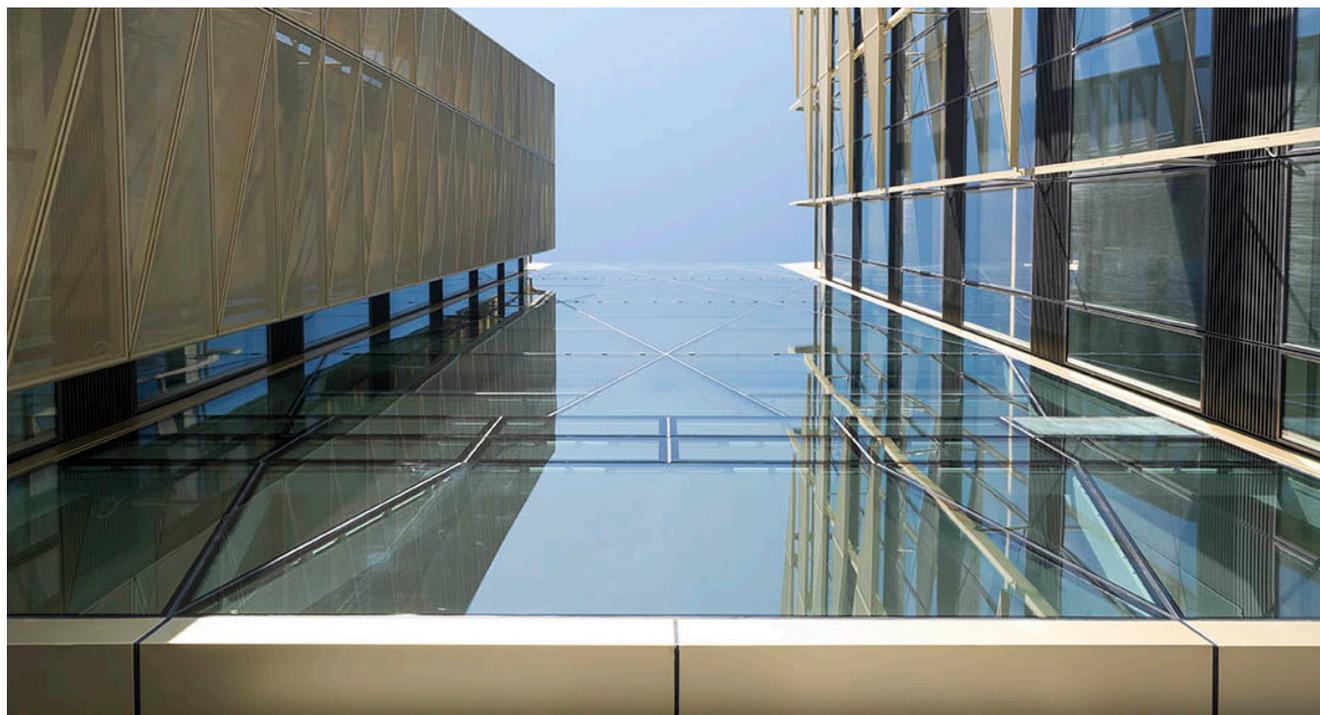
01 BANKING INDUSTRY

Innovative solutions to traditional business processes introduced to date (Fig 1.1)

The innovative solutions introduced to traditional business processes varies amongst the banks surveyed with the majority of banks introducing innovative solutions in the areas of digital distribution/e-commerce sales, mobile payments, social media marketing, Big Data analytics, social media complaints handling and secure messaging. Some banks have also introduced telematics/biometrics/wearable technologies, artificial intelligence, robotics and auto provisioning of cards for Apple/Android Pay.

INNOVATIVE USES OF DATA DATA PROFILING/ BIG DATA

SOCIAL MEDIA MARKETING

REG TECH

SECURE MESSAGING

SOCIAL MEDIA COMPLAINTS HANDLING

MOBILE PAYMENTS

ROBOTICS

AI/MACHINE LEARNING

DIGITAL DISTRIBUTION/ E-COMMERCE SALES

TELEMATICS/BIOMETRICS/ WEARABLE TECHNOLOGIES

AUTO PROVISIONING OF CARDS FOR APPLE & ANDROID PAY

Fig 1.1 Banks – Innovations Introduced

Product areas impacted by innovative solutions introduced

The product areas impacted by the different innovative solutions vary by the type of innovative solution. For instance, mobile payment solutions mostly apply to payment services, payment accounts, savings and deposit accounts and credit cards while technologies such as social media marketing, social media complaints handling, secure messaging and digital distribution apply to a wide variety of product areas including payments, savings, personal loans, mortgages, investment products, insurance products and credit cards.

Innovative solutions planned (Fig 1.2)

The greater majority of banks surveyed are examining the introduction of further innovations such as Big Data analytics, digital distribution, social media marketing/complaints handling, secure messaging, robotics and biometrics. Some banks are also looking at introducing other technologies including artificial intelligence/ machine learning, RegTech, distributed ledger technology/blockchain, and virtual and augmented reality.

Individual banks are examining the innovative technologies for specific uses as follows:

- Chatbots to handle customers' complaints via social media;

- Virtual reality for customer interaction and advisory services;

- Voice biometrics;

- Use of third party data sources for the delivery of future products and services;

- Blockchain to support internal system integration payment solutions and HR processes; and

- Optical Character Recognition (OCR) technology to pre-populate customer data from ID documentation.

Innovation hub

A number of banks surveyed indicated that they have established innovation hubs or dedicated units focusing on digital research and innovation.

These hubs or innovation areas are used to research evolving digital technologies, develop new customer propositions, examine the potential relevance to their business and, in some cases, trial new technologies and innovations. The types of technologies being examined in a hub environment include digital automation, machine learning, robotic process automation, chatbots, blockchain, open banking, API economies and mobile on-boarding.
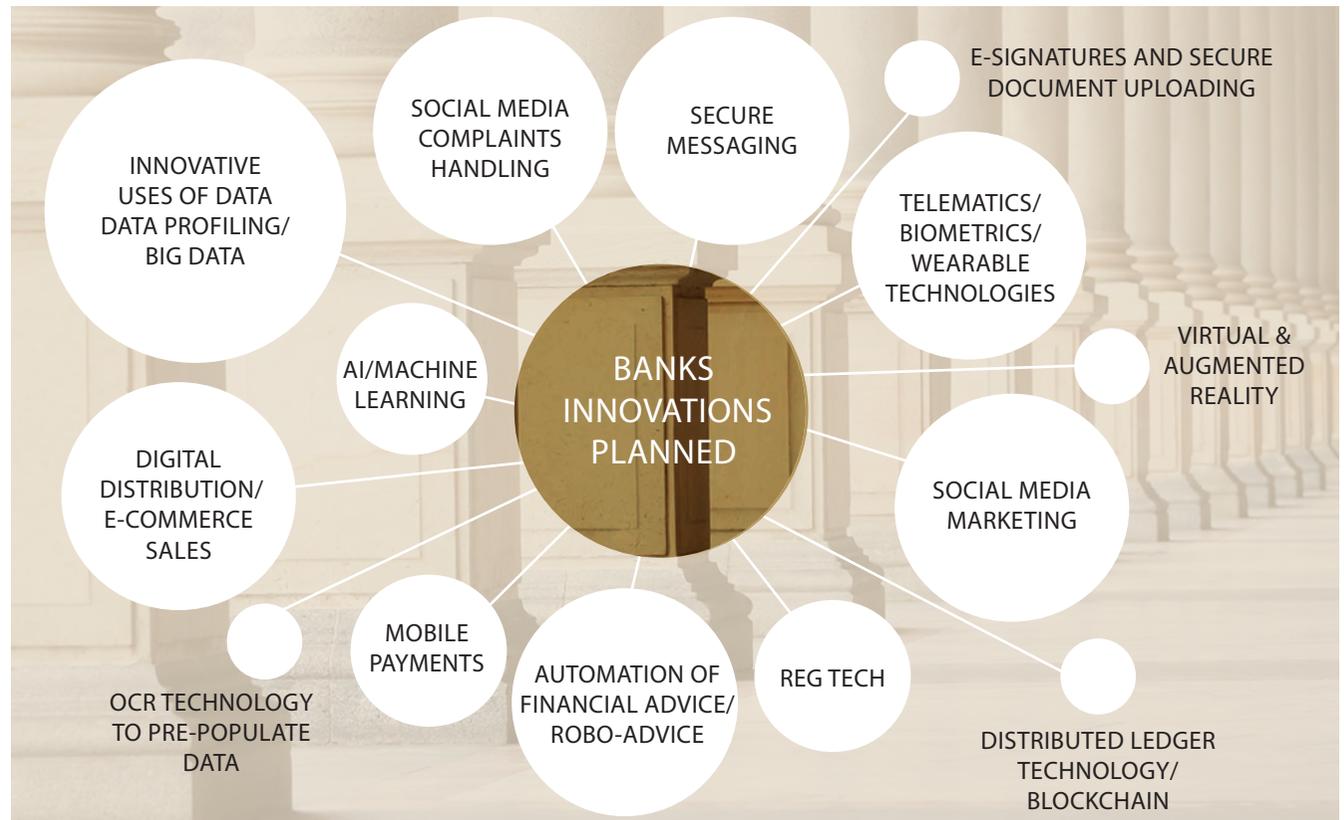

Fig 1.2 Banks – Innovations Planned

02 INSURANCE INDUSTRY

Innovative solutions to traditional business processes introduced to date (Fig 2.1)

All insurance firms surveyed have already introduced innovative solutions in the area of social media marketing, while the majority of insurance firms are already using social media complaints handling and digital distribution. A number of insurance firms have also introduced secure messaging, biometrics/telematics and mobile payments. Some insurance firms are also introducing other innovative solutions including Big Data analytics, pilots for automation of manual processes, live chat facility, tools for content acceleration and security, facility on websites to pay arrears/renewals, robotics and electronic signature recognition.

Product areas impacted by innovative solutions introduced

The innovative solutions introduced to date are spread across the main product areas for insurance firms in areas such as social media marketing, social media complaints handling, digital distribution, mobile payments and secure messaging. The exception is telematics, which is specifically being used in motor insurance.

Fig 2.1 Insurance Firms – Innovations Introduced

Innovative solutions planned (Fig 2.2)

A number of insurance firms surveyed are planning to introduce further innovative uses of technologies such as Big Data Analytics, telematics, and artificial intelligence/machine learning. Individual firms are also exploring innovative technologies such as:

- Connected/Smart contracts;

- Distributed Ledger Technology/Blockchain;

- Regtech;

- Customer Account App;

- Digital Distribution/e-commerce sales;

- Social media marketing;

- Social media complaints handling;

- Expansion of digital distribution and mobile capabilities;

- Fraud analytics;

- Expansion of digital/social media marketing capabilities; and

- Automation of financial advice/robo-advice.

Individual insurance firms are planning to introduce innovative technologies for specific uses such as:

- Building end to end digital capability across all business lines - sales, service, renewal, claims;

- Telematics – for private motor insurance - trialing and implementing in next 12 to 18 months;

- Social media complaints handling – from monitoring to responding to complaints via social media;

- Artificial intelligence - pricing for motor and home insurance;

- Mobile payments – pay for premiums, mid-terms, renewals and missed direct debits via mobile enabled platform; and

- Fraud analytics.

Innovation Hub

Most of the large insurance firms surveyed indicated that innovation hubs are located at their group headquarters.
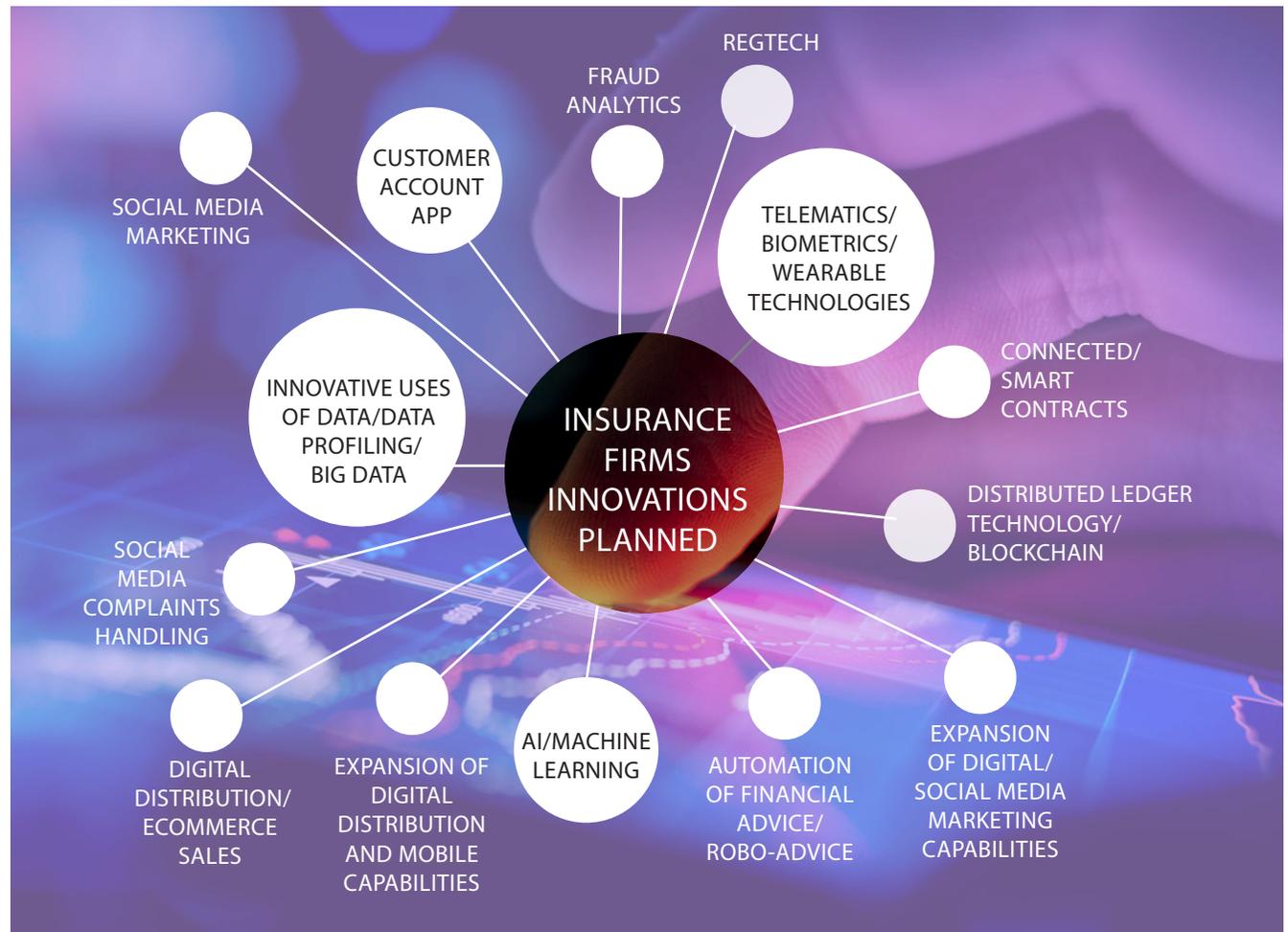

Fig 2.2 Insurance Firms – Innovations Planned

03 INVESTMENT FIRMS

Innovative solutions to traditional business processes introduced to date

The investment firms surveyed reported very little innovative solutions to traditional processes introduced to date.

Innovative solutions planned (Fig 3.1)

Investment firms surveyed are planning to introduce innovative solutions in the following areas:

• Social media marketing;

• Automation of financial advice/robo-advice;

• Regtech; and

• Enhancements to websites.

Investment firms surveyed are specifically examining innovative technologies for the following uses:

• Building their social media profiles to increase brand and product awareness;

• Electronic identity verification for new and existing clients;

• Electronic signature for client onboarding; and

• Online discretionary investment product offering.

Fig 3.1 Investment Firms – Innovations Planned

04 PAYMENT/E-MONEY INSTITUTIONS

Innovative solutions to traditional business processes introduced to date

As regards innovative solutions introduced to date, some of the payment/e-money institutions surveyed have introduced secure messaging, digital distribution of their products and smart contracts.

Innovative solutions planned (Fig 4.1)

Payment/e-money institutions surveyed are planning the introduction of innovative solutions in social media marketing, secure messaging, digital distribution/e-commerce sales, connected/ smart contracts, mobile payments, social media complaints handling, innovative uses of data/data profiling/Big Data, artificial intelligence/machine learning and Regtech, for the following uses:

- Partner-enabled online quick quote and application process;

- Support for customer electronic document capture and electronic personal loan contract signature;

- Secure email used for sales and servicing customer contacts; and

- Each innovation relates to platform and internal tool capabilities that will be used for supporting products.

Innovation Hub

The payment/e-money institutions surveyed indicated that innovation hubs are located at their group headquarters.

Fig 4.1 Payment/E-Money Institutions – Innovations Planned

05 RETAIL INTERMEDIARIES

Innovative solutions to traditional business processes introduced to date (Fig 5.1)

The innovative solutions already introduced to traditional business processes across the retail intermediaries are set out below:

- Digital distribution/e-commerce sales;
- Social media marketing;
- Mobile payments;
- Social media complaints handling;
- Innovative uses of data/data profiling/big data;
- Secure messaging;
- Connected/Smart Contracts;
- Regtech.

Product areas impacted by innovative solutions introduced

The product areas impacted by innovative solutions introduced to date by retail intermediaries includes life and non-life insurance products, health insurance and loan products.

DIGITAL DISTRIBUTION/ E-COMMERCE SALES

MOBILE PAYMENTS

INNOVATIVE USES OF DATA/ DATA PROFILING/ BIG DATA

SOCIAL MEDIA MARKETING

REGTECH

SECURE MESSAGING

CONNECTED/ SMART CONTRACTS

SOCIAL MEDIA COMPLAINTS HANDLING

Fig 5.1 Retail Intermediaries – Innovations Introduced

Innovative solutions planned (Fig 5.2)

The innovative solutions planned varies across the retail intermediaries sector as follows:

- Artificial intelligence/machine learning;

- Telematics/biometrics/wearable technologies;

- Regtech;

- Connected/smart contracts; and

- Innovative uses of data/data profiling/ Big Data.

Retail intermediary firms surveyed are looking at innovative solutions for the following uses:

- Mobile enabled websites;

- Develop online capability for customers to have an "online all the way" experience for procuring or completing transactions;

- Web chat services providing secure messaging channel for customers who wish to transact in that medium;

- Develop existing data warehouse and MI systems environment to provide real-time analytic capability and Business Intelligence (BI);

- Electronic signatures;

- Online Motor & Home Insurance Quotation systems which include payment;

- Online renewal payment of professional indemnity policies; and

- HR Management System to record compliance with Minimum Competency Rules.

Innovation Hub

The majority of retail intermediaries either do not have innovation hubs, or access technology innovation at their group headquarters, or through industry-led research centres such as IC4 (Cloud Computing) and CeADAR (Centre for Applied Data Analytics Research).

Fig 5.2 Retail Intermediaries – Innovations Planned

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