

Intellectual Capital

We are investing in our information and communications technology (ICT) systems, our internal processes and our ability to innovate in order to transform UniCredit's operating model and provide a better customer experience.

OUR STOCKS OF CAPITAL



RESULTS

- **10%** outperformance of 2019 application decommissioning target
- Transformation & Innovation Advisory Board established

COMMUNITY IMPACTS



2019 PRIORITIES

- Further ICT optimisation to support our transformation
- Increased process automation and digitalisation for the benefit of our customers
- Continued investment in cyber security and innovative data analytics technologies



Ensure effective and secure ICT systems

Streamlining and fortifying our ICT framework is key to improving the efficacy of our operations and ensuring a superior service for our clients.

Reshaping our ICT

As our multichannel digital business advances, we continue to invest in the modernisation of our systems. In 2018, we made headway with the general reshaping of our ICT infrastructure so as to make it leaner, better-performing and more cost-efficient.

We made good progress with our decommissioning effort which ensures a technological refresh by cleaning up the application landscape and the underlying infrastructure.

- We surpassed the 2019 target for applications by approximately 10 percent, with over 1,200 removed since 2016, while our mainframe and open systems technologies have marked a reduction of roughly 20 percent and 9 percent respectively since 2017.

We also worked to update the technological framework supporting our core banking applications, making it better equipped to deal with the exponential growth in digital flows and more cost-effective. This included reengineering the programming language of our core system, which resulted in a 36 percent increase in efficiency by the end of 2018.

Enhancing our ICT security

The progressive digitalisation of our services calls for a comprehensive cyber security management strategy. We also work to respond effectively to the regulatory environment which is evolving to address confidence in financial systems as well as consumer rights. For instance, the entry into force of the European General Data Protection Regulation (GDPR) sharpened focus on data protection topics, making an improvement of our security and data breach management opportune.

UniCredit's ongoing multi-year ICT security plan is grounded in a continuous improvement model and dedicated process and policy framework.¹ In 2018, we carried out a wide set of activities, including:

- working on the fortification of our perimeter defences

- implementing solutions aimed at discovering vulnerabilities and incrementing controls to improve the security levels of our applications. These measures aim at reducing the likelihood and impacts arising from cyber attacks. For example, despite the cyber security attack at UniCredit Italy on 21 October 2018, by responding rapidly we ensured that no banking data was compromised²
- launching a specific programme to make our access rights management more robust
- defining and implementing a dedicated compliance cyber security framework in line with the application of the Payment Services Directive 2 (PSD2) and GDPR regulations regarding payment services and data protection respectively.

As part of our ongoing investment in strengthening cyber security awareness in our employee population, we run online ICT security training courses. In 2018, we provided over 45,000 hours of dedicated training in Italy alone.

We also performed two phishing simulation campaigns involving more than 20,000 employees and published monthly informative videos on our Group intranet portal.

Optimise processes and services

Our continued investments in process improvements enable us to be more effective, to the benefit of our clients.

Our digital drive is synonymous with our efforts to dematerialise processes and services as we work towards becoming a paperless bank. We kicked off our *Paperless Branch* programme in Italy in June 2018, dedicating approximately €14 million in the first two years. The programme's objective is to achieve the full digitalisation of all document flows by leveraging existing digital solutions and introducing new processes and services such as the digitalisation of teller transactions. These changes are expected to result in a significant saving in resources (e.g., the dematerialisation of teller slips is alone expected to bring a saving of over 100 million sheets of paper per annum) and a simpler, more satisfying customer experience. Moreover, we also anticipate leaner administrative and archiving processes, cost efficiency and reduced operational risks.

1. Includes the international standards NIST Cyber Security Framework and COBIT5 Framework.

2. Refer to the UniCredit press release from 22 October 2018 for more information.

Our Strategy

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Following a successful pilot phase, in 2017-2018 our robotic process automation projects were brought into production, with a total of 19 robots working on 11 processes. By automating highly repetitive rule-based processes, their application is set to contribute to the improvement of our operations and commercial activities, freeing up resources for more value-added activities, improving processing time and data quality, and reducing operational risk.

We have also combined machine learning with other technologies to develop an automated classification solution for document management, thereby enabling more efficient turnaround. The solution piloted in 2018 when it was applied to the management of inbound flows of legal documentation within our garnishment process. During the trial, over 68,000 documents were automatically categorised with roughly a 92 percent accuracy rate. We are finalising this solution with the objective of extending its application in the future.

Leverage innovation

We continue to scout and develop innovative solutions which facilitate our responsiveness to clients' needs and further optimise our operations.

We use big data and analytics technologies so as to advance our value proposition, increase customer satisfaction and improve internal processes. A number of pilot activities and initiatives have been launched this year in our Italian banking activities. These include using analytics as a tool to discern clients' expectations in order to provide them with a better service and better meet their needs, and as a means of optimising our processes such as that for credit pre-approval for our consumer finance clients. Initial results in these areas have been positive, while numerous other fields of our operations, such as Audit and Compliance, stand to benefit from this approach and are currently being assessed for use case development.

In 2017, UniCredit joined a consortium of 13 European banks with the purpose of working together to build a trade platform based on blockchain technology, thereby offering clients an innovative service digitalising, standardising and simplifying open account transactions and enabling access to financial instruments. The we.trade platform pilot was launched in 2018 following the establishment of the we.trade Innovation DAC JV, of

which UniCredit is a shareholder. The platform provides users with an accessible and secure environment where they can find business counterparts, make and negotiate trade proposals, request financial services from their banks and automatically set payment trigger conditions. Initially serving small and medium enterprises (SME) clients, the service is to be extended to large and multinational corporation (MNC) corporate clients.

In 2018, *UniCredit EVO*³ established a strategic partnership with Meniga, an Icelandic best-in-class fintech in the field of digital banking, investing €3.1 million. Implementation of Meniga's software across our Group's commercial activities starting in Italy and Serbia is set to strengthen our digital proposition for our retail and SME customers, making the banking experience even more personalised. In fact, we are now able to offer our customers a consolidated view of all their card and account transactions, including search functions, budgeting and financial planning tools.

A further investment of €800,000 was made in 2018 in the Italian start-up Axyon AI. The resulting partnership is due to strengthen our advisory activities through the application of Axyon's artificial intelligence-based technology and know-how. This includes a web-based application delivering liquidity analysis and market insights to our financial professionals so they can better advise their clients.

FOCUS

Transformation & Innovation Advisory Board

In line with our endeavour to explore innovative ideas and solutions to the benefit of our customers, we announced the creation of a Transformation & Innovation Advisory Board in January 2019.⁴

The Advisory Board will meet quarterly to review critical topics for the banking industry such as technology and data, consumer trends, fintech ecosystems and security and risk mitigation, with the objective of proposing tangible development opportunities to our CEO, as well as regularly updating the Board of Directors.

The Advisory Board will include four external technology and innovation thought leaders bringing expertise in big data and artificial intelligence, customer-centric data products, cyber security and fintechs. They will be joined by the CEO and other senior managers as permanent members.

3. Refer to the 2016 Integrated Report for more information.

4. Refer to the UniCredit press release from 16 January 2019 for more information.