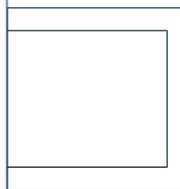




MEDIOBANCA GROUP IT EXECUTIVE SUMMARY

May 2020



MEDIOBANCA

AGENDA

Introduction

a) Mission

2.Mediobanca Group IT

a) Group IT at a glance

b) Governance model

c) Mediobanca Innovation Services

3.Business continuity and resilience

4.IT Risk & Cyber Security

5.Innovation



MEDIOBANCA GROUP IT - MISSION

- ◆ An indepth **transformation** is ongoing in financial services due to driven by developments in digital technologies and the resulting changes in customer behaviour encouraged by the new **competitive scenario**
- ◆ **Mediobanca Group IT** aims to achieve internal transformation by exploiting new technologies and leading the digital evolution process
- ◆ This **internal transformation** supports:

Customers.
by offering them the right products, using the channel they prefer and in compliance with security requirements



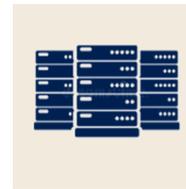
Management,
by facilitating decisions with the help of the best technological solutions

Shareholders,
by providing a major advantage in reducing costs and increasing efficiency



Employees, by building an environment that support the way they work

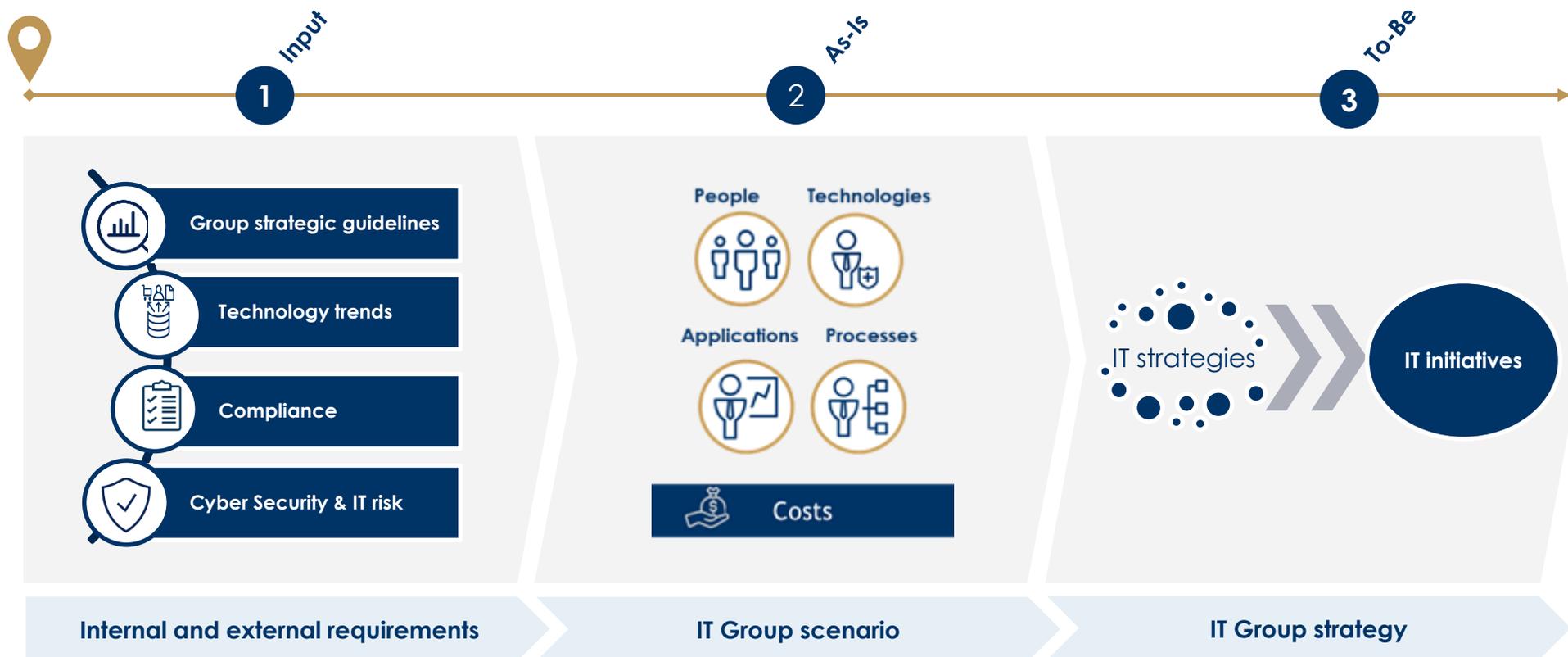
Suppliers, by means of advanced collaboration tools



Group initiatives based on **ESG criteria**

IT STRATEGY FOCUSED ON GROUP NEEDS/TARGETS...

The IT unit leads the **technological and digital evolution** in order to meet targets and business needs. It has a **focus on mid-term priorities** to promote a coherent **development process** (systems, technologies and processes) towards a “**cognitive**” banking capable of ensuring a **customized experience for all parties, clients in particular**.

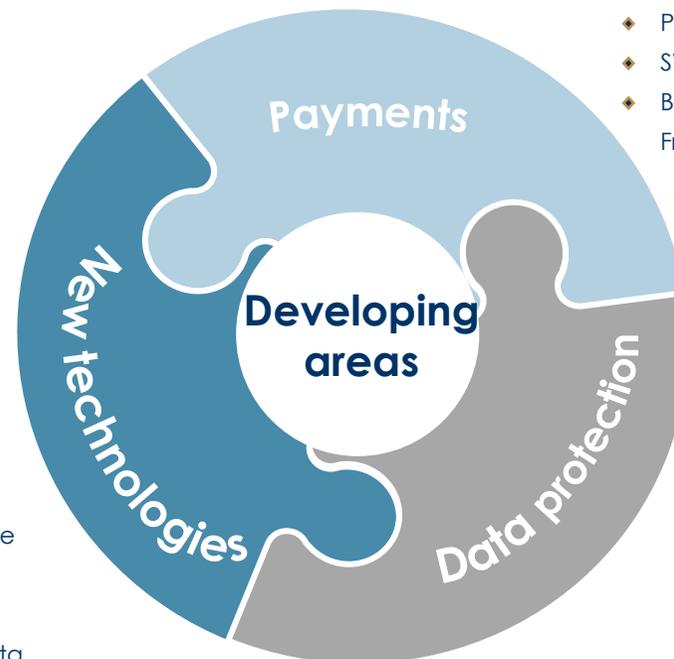


...AND INCREASING REGULATION

- ◆ The banking sector is constantly facing regulatory changes, and it is important to be compliant. The regulatory authorities' focus is increasingly on **innovative technologies components**
- ◆ Many changes in regulation are the result of changes in data management and digitization in banking technology



- ◆ EBA recommendations on outsourcing to cloud service providers
- ◆ Joint committee discussion paper on the use of Big Data by Financial Institutions



- ◆ PSD2
- ◆ SWIFT CSP
- ◆ BANCOMAT Security Verification Framework
 - ◆ MIFID II
 - ◆ IFRS 9
 - ◆ COREPc
- ◆ General Data Protection Regulation
- ◆ Article 29 Data Protection Working Party
- ◆ CBS 239

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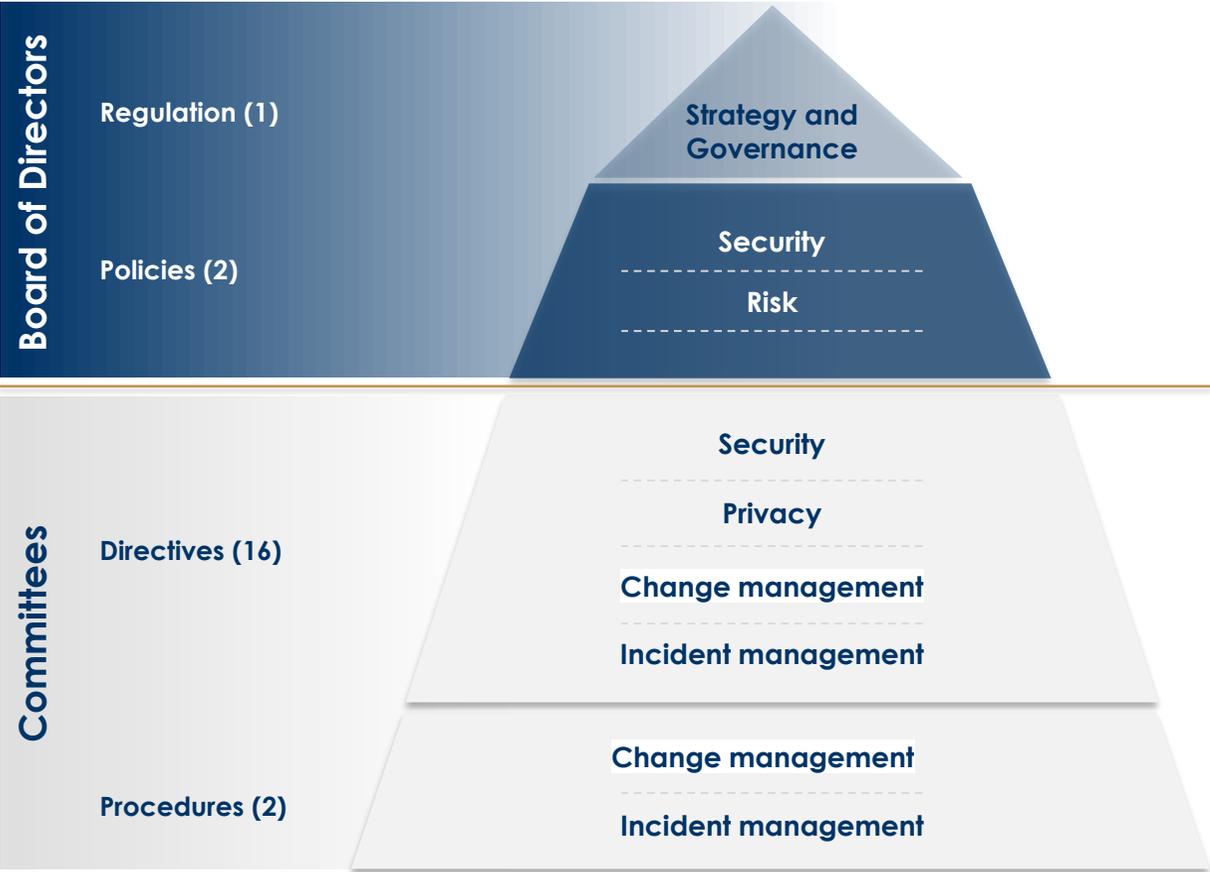


GROUP IT AT A GLANCE

Workforce	Applications	Technology	IT costs
<p data-bbox="167 372 451 419">240 IT employees</p>  <ul data-bbox="126 646 499 1022" style="list-style-type: none">• 5% of the total Group workforce• Women represent one-fifth of the IT workforce• Age distribution better than industry average	<p data-bbox="613 354 924 408">750 Business applications</p> <p data-bbox="613 436 924 491">300 Applications "IT for IT"</p>  <ul data-bbox="602 636 1011 1200" style="list-style-type: none">• Different strategies: management of advanced IT services which support the business diversification, with basic IT services outsourced• High proportion of market packages (above industry average)• Highly specialized applications, in line with the Group companies' differing requirements	<p data-bbox="1073 354 1489 472">>3,700 virtual servers in a primary Data Center and a DR site</p>  <ul data-bbox="1094 636 1466 1086" style="list-style-type: none">• Technological assets owned by MIS and outsourced to IBM• Investments in resilience and highly reliable of data centres• A technology update is ongoing to remove certain technologies no longer considered cutting edge	<p data-bbox="1570 347 1929 429">€187.8m IT expenses in FY 2018-19</p>  <ul data-bbox="1539 629 1964 1308" style="list-style-type: none">• IT costs are up 11% compared to the last FY, due to the new scope of operations (e.g. consolidation of Banca Esperia) and growth of banking activities (Consumer Banking and Specialty Finance especially)• Extra IT investments, used to launch the FAs network, have been fully absorbed by the efficiencies achieved through the integration of the branches acquired from Barclays

GROUP GOVERNANCE MODEL

- ◆ **The Mediobanca Group sees the protection of information** as a fundamental principle in safeguarding the integrity of its business, which enables it not only to comply with the regulations in force but also achieve its strategic objectives.
- ◆ The IT risk management process is vital in directing organizational, procedural and technological coverage and to ensure that the measures adopted are appropriate to the risks



The Group’s IT regulations describe:

- **The Group IT governance model;**
- The respective **roles and responsibilities** of the governing bodies and the organizational units involved
- The lifecycle of the internal IT regulations
- The market standards and best practices, both internal and external, on which the governance of the Group’s IT system is based

Mediobanca supervises the Group IT system in the interests of the associate companies, with the objective of promoting adequate services to support the business, from the perspective of generating synergies and keeping down costs.

Technology infrastructure management is centralized at Mediobanca Innovation Services, whereas **the lifecycle of the individual business applications** is managed by **the Group companies themselves.**

MEDIOBANCA INNOVATION SERVICES (MIS)

Mediobanca Innovation Services (MIS) is the Group's services company and technology innovation centre, providing IT, administration and facility management services in support of developing the Group's IT systems

ADMINISTRATION AND FACILITY

- ◆ Asset cycle management
- ◆ Liability cycle management
- ◆ Document archiving
- ◆ Mobile services management
- ◆ Facility management

APPLICATIONS

- ◆ Supervisory reports
- ◆ Payment and money systems
- ◆ Finance
- ◆ Treasury services



TECHNICAL PARTNER

- ◆ Technology infrastructure demand management
- ◆ Monitoring of services provided

OUTSOURCED TO IBM

- ◆ Storage and backup
- ◆ Business continuity
- ◆ Disaster recovery
- ◆ Service desk
- ◆ Network management (voice and data)
- ◆ Change management
- ◆ Internal helpdesk
- ◆ Operational safety
- ◆ System services

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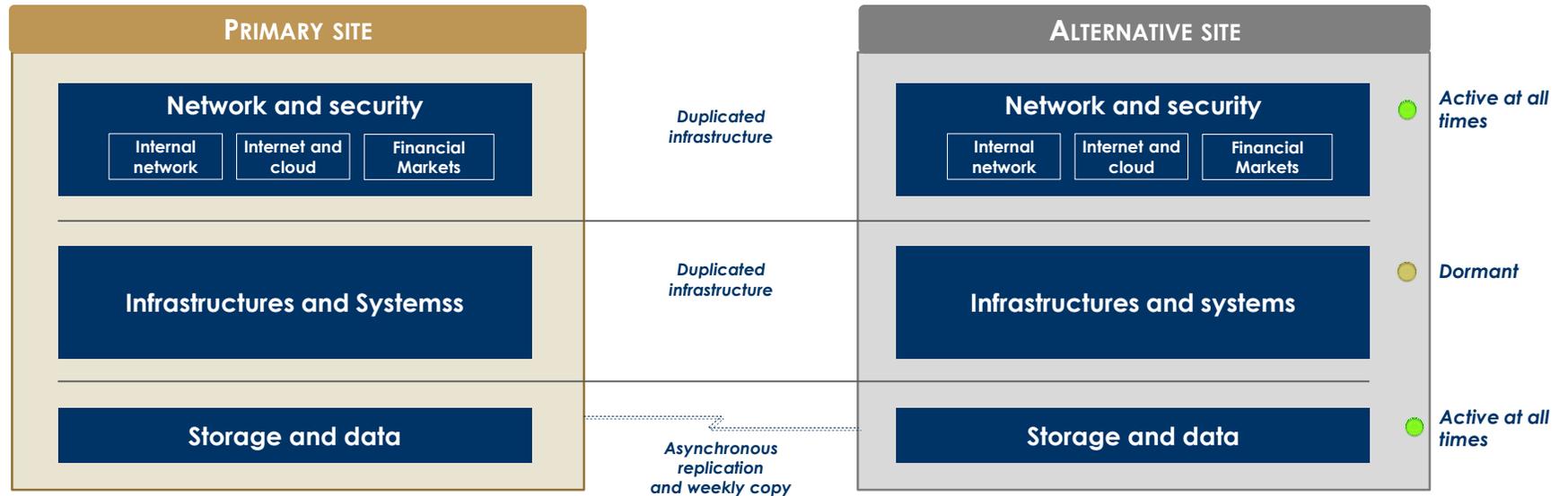
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BUSINESS CONTINUITY AND RESILIENCE

The Group's technology infrastructure is based at the head office of MIS in Via Siusi, Milan. An alternative site (active-passive) ensures continuity in the event of the primary data centre being unavailable (disaster recovery scenario).



Investments in resilience and high reliability

The disaster recovery (DR) solution is designed to protect operations from exceptional events (e.g. natural disasters), while investments in high reliability are intended to reduce the impact of small discontinuities that can happen day-to-day due to human error or technical equipment failures.

The main initiatives in this area include:

- ◆ **Strengthening network, storage and computing resource duplications**, to further reduce the risk of failure
- ◆ **Enhancement of application monitoring solutions**, for a more timely detection of malfunctions
- ◆ **Developments in release management processes**, aimed at minimizing risks and reducing time-to-market

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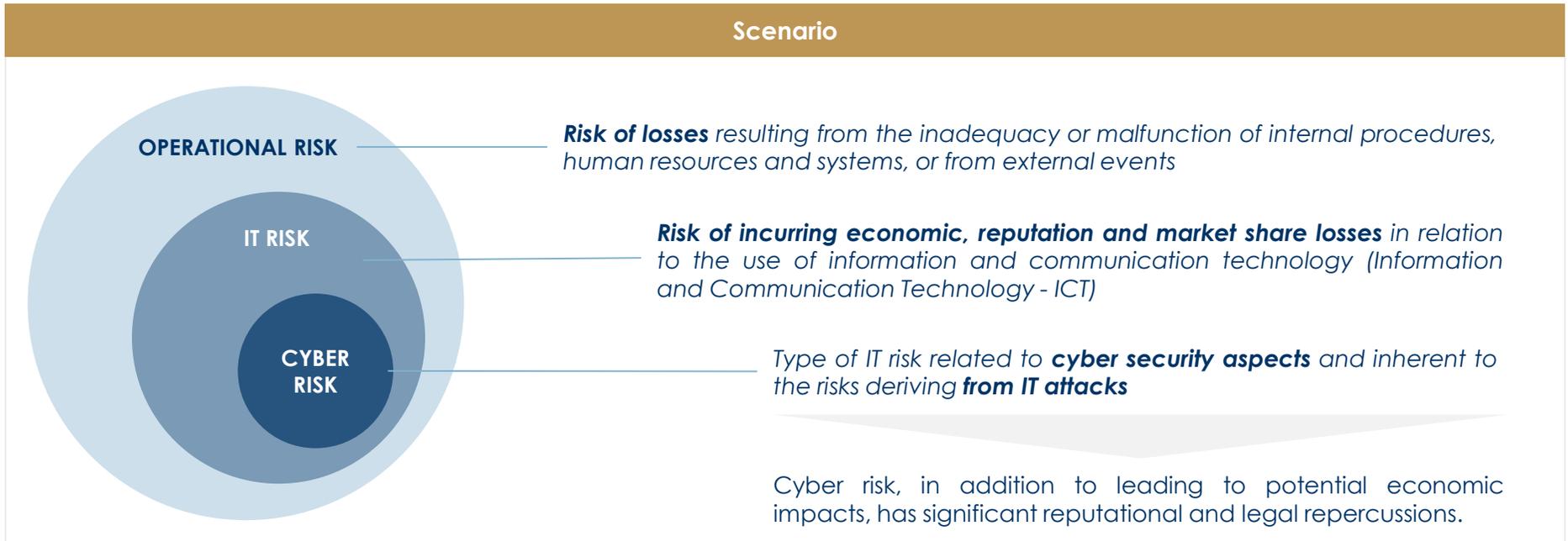
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IT RISK AREA

The Mediobanca Group, according to the provisions of Basel, has developed a model that combines Operational, IT and Cyber Risk.



Management of Cyber Risk

- In addition to purely technological security measures, Cyber risk management also includes organizational and procedural safeguards aimed at spreading a corporate culture **on information security issues**
- In order to oversee cyber risk, the Mediobanca Group has set up the **'IT Risk & Cyber Security' Group function** within Group IT & Governance with functional reporting to Operational Risk Management

CYBER SECURITY STRATEGY DRIVER

Cyber Security Strategy Driver

The **IT security strategy** is set up according to some important **drivers**.



GROUP BUSINESS PLAN

- ◆ Adequate protection of the business of the acquired companies (e.g. Esperia, RAM)
- ◆ Specific security measures for new types of business (e.g. Wealth Management)



BUSINESS TARGETS

- ◆ Different protection measures in relation to the specific Business (corporate, retail, etc.)
- ◆ Guarantee of the achievement of an adequate safety / operational ratio



COMPLIANCE WITH REGULATIONS

- ◆ Implementation of the security measures required by upcoming regulations (e.g. GDPR, PSD2, EBA)



RISK AND FRAUD MANAGEMENT

- ◆ Risk mitigation measures and management of fraud attempts
- ◆ Management of new threats and types of cyber attacks



TECHNOLOGICAL EVOLUTION

- ◆ Adoption of adequate security measures in line with new technological trends and digital evolution, especially in relation to the retail banking sector



INCIDENT MANAGEMENT

- ◆ Guarantee of the resilience of the business in the face of accidents
- ◆ Incident learning (lessons learned) and definition of prevention measures

IT RISK & CYBER SECURITY FRAMEWORK

The Group's cyber security strategy is implemented by defining an IT Risk & Cyber Security Framework, a reference model for the management of technological, procedural and organizational activities in order to protect the Group's information assets.

FRAMEWORK	IDENTIFYING	PROTECTING	FINDING	REACTING
	"Proactive" approach	"Proactive" approach	"Investigative" approach	"Reactive" approach
	Understanding the business scenario, the assets that support critical functions, and related IT risks	Limit the impact of a potential incident by managing identity and access, data protection, training, security procedures and processes	Activities aimed at identifying risk events that may compromise the protection of information assets	Activities aimed at managing events/accidents and restoring operations by limiting the impact on the business (resilience)
	<ul style="list-style-type: none"> Information security management system Asset management Cyber security mission IT risk analysis and assessment IT risk strategy 	<ul style="list-style-type: none"> Architectural safety standards Identity protection and access control Risk and security awareness Data security Procedures for operational safety 	<ul style="list-style-type: none"> Design of controls and event analysis Continuous security monitoring services Outsourcing risk monitoring Security testing Attack scenario development analysis 	<ul style="list-style-type: none"> Cyber security defence plan Financial fraud management Relationship management with SOC CERTFIN and knowledge sharing Security incident management competence centre

Framework features:

- ✓ The framework is independent of technologies, is inspired by best practices and industry standards (NIST, 27001), and reflects the Directives issued by the Mediobanca Group*
- ✓ The framework uses a risk-based approach to address priorities and qualify the decisions that the Group will have to take
- ✓ The framework guarantees scalability and flexibility, evolves in accordance with changes in the company's business models and channels, and with developments in attacks and new technological or architectural trends
- ✓ The framework promotes a "proactive" cyber security and IT risk paradigm, by stressing the concept of "detection" of attacks and the "by design" management of weaknesses that can be exploited to perpetrate financial fraud and cyber attacks

IT RISK & CYBER SECURITY – APPROACHES

PREVENTION

Development of an organization oriented towards cyber security risk, in order to protect critical infrastructures, human resources and critical data for the business.

Information security system

- Guarantee of protection in terms of **confidentiality** and **integrity** of the Group's information assets

Architectural safety standards

- Technological services according to a **security by design** approach

Risk and Security Awareness

- **Training and raising awareness** on information security issues

Controls and security measures

- Definition of security controls by means of skills – **business models – operational models**

DETECTION

Monitoring of all phases of the life cycle of a service, ensuring timely monitoring of risk and threats in order to govern the security and protection of the **Group's information**.

Risk analysis

- Ensures the effectiveness of the IT resources protection measures

Outsourcing risk monitoring

- Monitoring and governance of IT risks related to outsourcing

Security testing

- Checking the security level of the systems that handle critical data and services

Risk scenario analysis

- Quantification of risk, supported by quantitative parameters

Development of risk scenario

- Analysis of new methodologies to maintain adequate protection levels

REACTION

- **Development of a corporate response** to guide the actions to be taken in the event of an attack - **cyber security defence plan**
- Definition of resilience plans to limit the impact **of a security attack**
- Implementation of operational plans to **restore services and access to information**

Cyber security defence plan

- Establishes a security incident response plan to mitigate an attack early on

Enterprise fraud management

- Supports Group companies in detecting financial fraud

Security operation centre

- Ensures prompt response in the event of security incidents

Knowledge sharing

- Participation in CERTFin, co-operation aimed at increasing the ability to manage cyber risks

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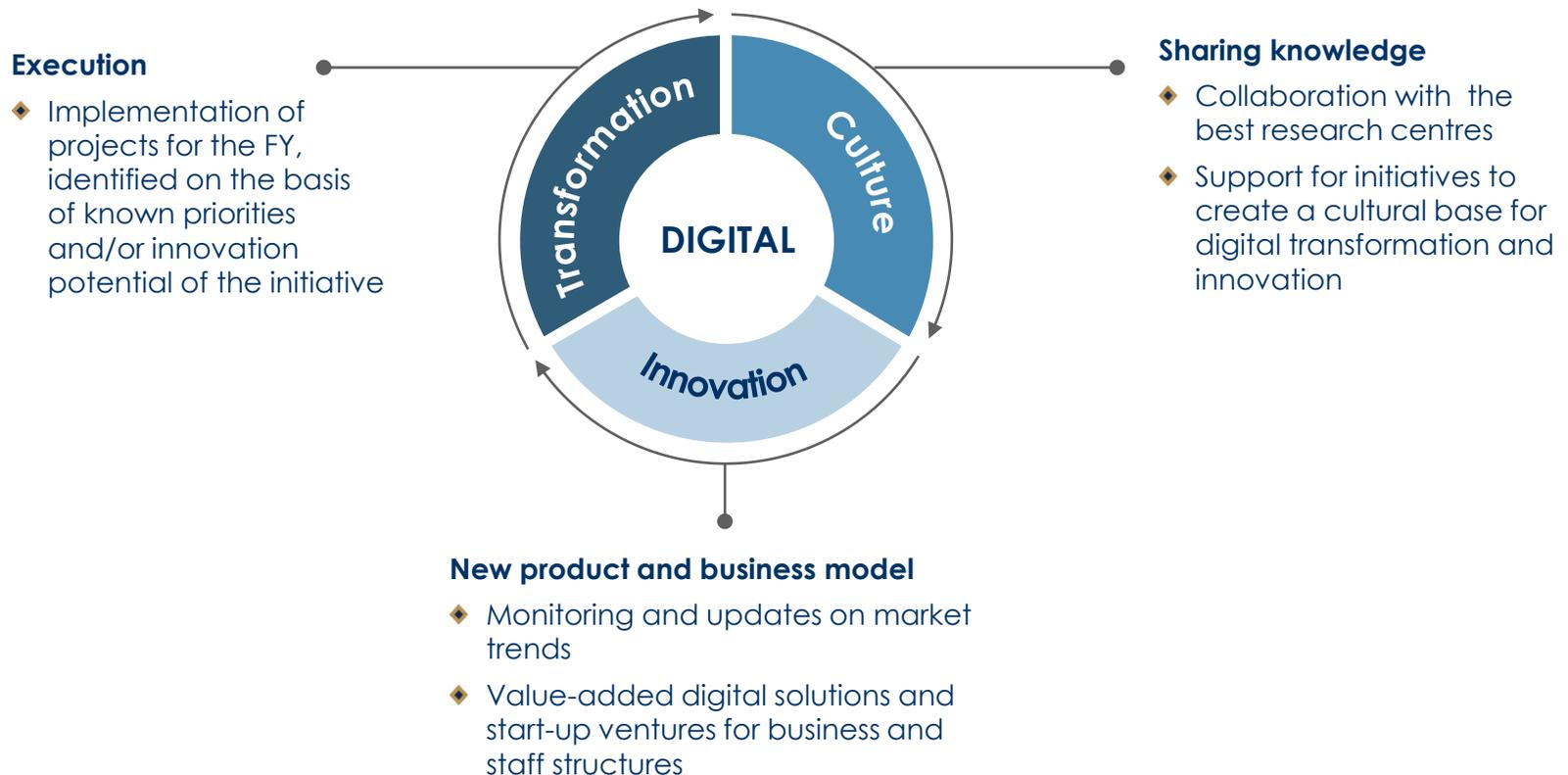
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INNOVATION

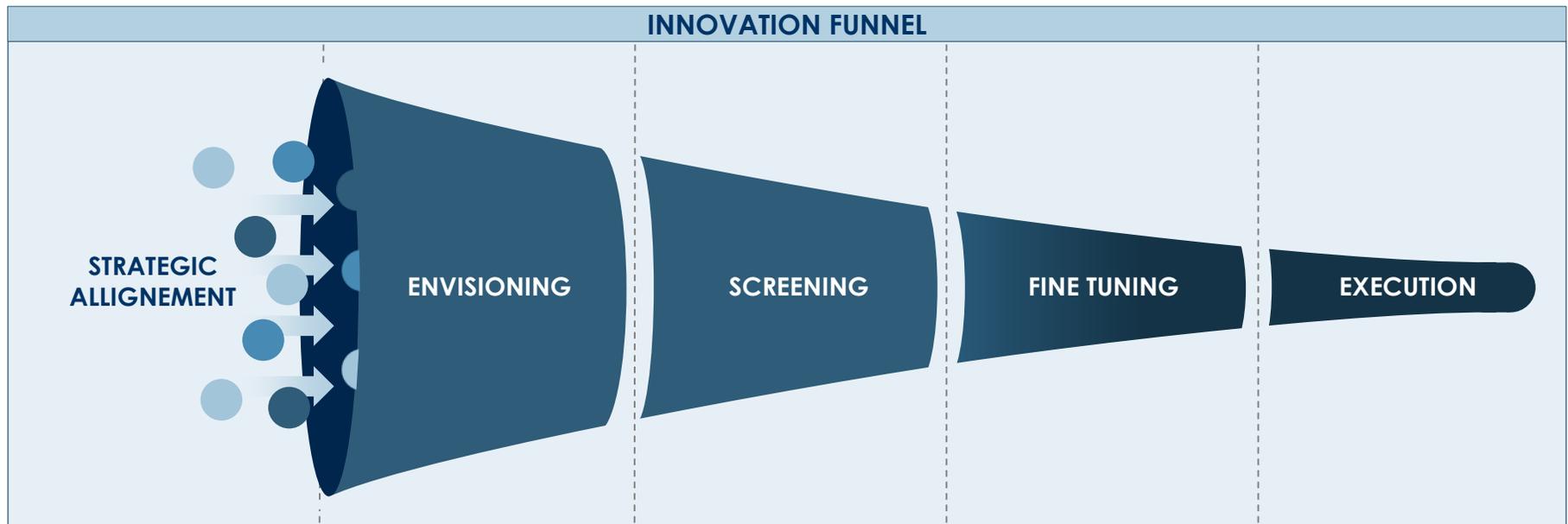
Mission Pillars

- ◆ According to Mediobanca's Strategic Plan, one of the priority objectives is to **oversee and stimulate the various aspects related to the Group's digital innovation**
- ◆ Issues relating to innovation are based on three pillars: **digital business transformation, culture and innovation**



INNOVATION Funnel

- ◆ To encourage the introduction and development of new technologies in the Mediobanca Group, the **IT Strategy and Digital Innovation unit** oversees a systematic innovation process that combines the incentives collected by participating in market initiatives, collaboration with Fintech and research centres, and the specific needs of each LE

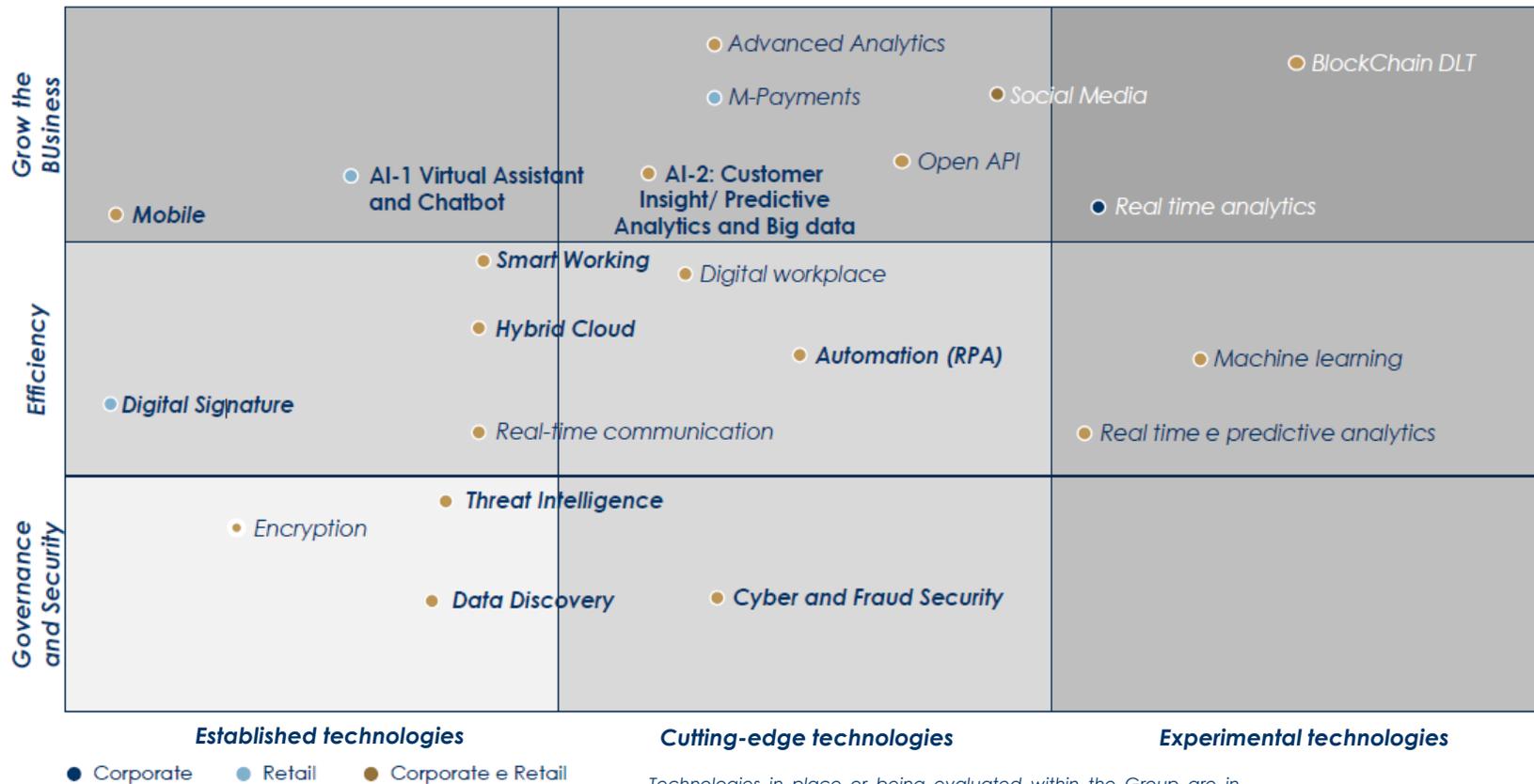


- ◆ From strategic alignment to execution, ideas are gathered through internal and external listening exercises, and gradually selected on the basis of the degree to which they are consistent with strategic priorities and with a view to identifying the best opportunity

INNOVATION

New technologies

- ◆ As part of the **digital strategy**, the innovation unit continuously monitors new technologies to assess whether or not it is worth adopting them, depending on the maturity of the technology itself



INNOVATION

Projects and experiments

Within the Group, different organizational units, working groups and partnerships have been created to promote the sharing of innovation, which enables us to have a leading position on the technological cutting edge.



MEDIOBANCA

IT Strategy and Digital Innovation is the organizational unit dedicated to the study and experimentation of new technologies



EUROPEAN
FINANCIAL
TRANSPARENCY
GATEWAY



Project that uses **blockchain technology** for the management of European regulated information



"Spunta Project", blockchain based, in partnership with the Fintech R3 (platform Corda) in collaboration with ABILab



Chatbot Project - **Virtual assistant created in CheBanca!** able to converse with customers in natural language



Test & Learn approach for **AI applications** in Private Banking and CIB