



**TIAC**

M&I SYSTEMS GROUP COMPANY

# STREAMLINING THE IMPLEMENTATION OF ESG SOLUTIONS

October 2024.



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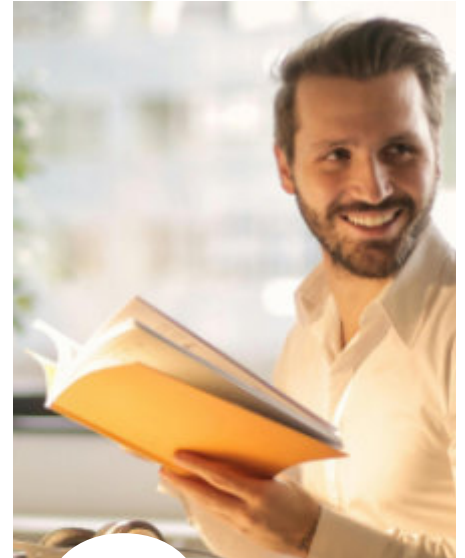
## **E**nvironmental:

A company's impact on the environment (e.g., GHG emissions, waste generation) and exposure to climate risks (e.g., flooding, drought).



## **S**ocial:

A company's impact on its people, stakeholders, and communities it operates in and exposure to social risks (e.g., inappropriate labor practices). It covers considerations such as labor standards, social inclusion and diversity, data protection, human rights, financial inclusion, and more.



## **G**overnance:

A company's governance, risk, controls, and accountability structures and processes. Governance encompasses risk management, values, reporting standards and transparency, senior manager remuneration, and anti-bribery and corruption policies, among others.

ESG is a set of standards used to measure the sustainability of a business or an investment.



# IMPACT ON FINANCIAL INSTITUTIONS



According to KPMG's Survey of Sustainability Reporting 2022, 96 percent of the G250 (i.e., the world's 250 largest companies by revenue based on the 2021 Fortune 500 ranking) report on sustainability and ESG matters.

The integration of ESG factors is reshaping the landscape of financial institutions, compelling them to adapt their strategies and operations to meet evolving societal and investor demands which leads to:



Expected ESG mandated assets to hit 50% of all professionally managed investments by 2025 in USA



Expected climate events cost by 2026



Companies with high employee satisfaction have ESG ratings higher than the global average

**Enhanced transparency, accountability and trust among stakeholders**

Resulting in positioning financial institutions as responsible stewards of capital and catalysts for positive societal change.

**Better assess long-term risks**

Such as climate change impacts, social inequalities, and governance lapses, which can affect financial performance and reputation.

**Develop new financial products and services**

Including green bonds, sustainable investment funds, and ESG-focused indices, catering to investors' preferences for ethical and sustainable investments.

**Strengthen reputation and brand image**

Customers and investors favor companies that demonstrate a commitment to sustainability and social responsibility.

**By implementing ESG at their core, financial institutions are creating a more sustainable future while generating superior financial returns.**





**REGULATION  
ASPECT**



"Being ESG assurance ready means identifying the relevant regulatory framework and having the right metrics with robust systems, processes, controls and governance for collecting and managing the data,"

said for Reuters Larry Bradley, KPMG's Global Head of Audit.

**18.5%**

Able to implement all required systems

**72%** European asset owners desire standardised ESG reports



3/4 companies unprepared for ESG audits

**2,400** ESG regulations worldwide

**150%** ESG regulations increased in last decade.

**The EU is currently the most active player, with the recently implemented Regulation on ESG rating activities promoting transparency and consistency in ESG ratings.**

On January 5th 2023, Corporate Sustainability Reporting Directive (CSRD) entered into force.

Directive mandates extensive ESG disclosure requirements for large companies, indirectly impacting how financial institutions assess their clients.

The Trustees of the IFRS Foundation announced the formation of the International Sustainability Standards Board (ISSB) on 3rd November 2021.

This newly formed body under the IFRS Foundation is developing comprehensive global baseline ESG disclosure standards expected to be adopted by various jurisdictions.

**ON A GLOBAL LEVEL**



## Prominent ESG frameworks impacting financial institutions:



### Sustainability accounting standards board

**(SASB)**

SASB provides industry-specific standards for disclosing financial material ESG information. Its framework helps companies identify and report on ESG factors most relevant to their industry, facilitating comparability and decision-making for investors.



### Task force on climate-related financial disclosures

**(TCFD)**

TCFD provides recommendations for disclosing climate-related risks and opportunities in financial filings. Its framework helps companies assess and disclose climate-related risks and opportunities, enabling investors to make informed decisions and manage climate-related risks effectively.



### Carbon disclosure project

**(CDP)**

CDP collects environmental data from companies worldwide, focusing on carbon emissions, water usage, and deforestation. Its framework helps companies measure and disclose their environmental impact, providing investors with insights into climate-related risks and opportunities.



# KEY ESG IMPLEMENTATION PROBLEMS FOR FINANCIAL INSTITUTIONS



Financial institutions aiming to achieve ESG objectives must make substantial adjustments to their IT infrastructure.

These changes span:



**Applications**



**Data integration**



**Architecture**



**Cloud migration**

And result in solutions that not only manage and capture ESG data but also new applications that encompass financed emissions models, climate risk models, ESG scorecards, climate stress tests, and climate-adjusted ratings.

3

**Key aspects of implementation problems**

- 1

Understanding ESG data: Leveraging technology, how can consumers gain insights into the ESG characteristics of their products?
- 2

Validating ESG data: How can technology automate the assurance of ESG data for listed issuers and validate ESG-labeled corporate bond issuance?
- 3

Transparency in ESG disclosures and reporting: Technology plays a pivotal role in enabling transparency regarding sustainability. Specifically, it can shed light on corporate asset characteristics and supply chain profiles.

In response to increasing regulatory pressures and evolving investor expectations, financial institutions are placing greater emphasis on integrating ESG factors.

This strategic focus ensures competitiveness, resilience, and alignment with broader sustainable finance objectives.





# **TECHNOLOGY ENABLERS AND FINTECHS AS ESG SOLUTION PROVIDERS**

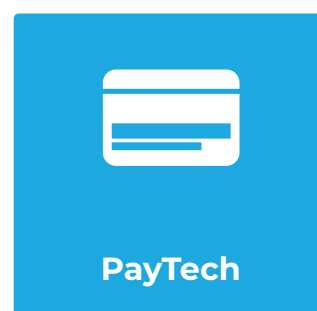
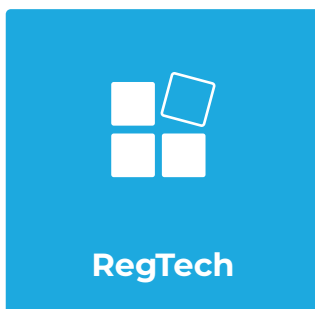


ESG fintech is at the intersection of ESG, financial services, and technology.



These include financial services-based technologies, products, and services adapted to ESG and climate change use cases.

**TIAC, as a technology enabler, is supporting all key fintech segments driving ESG implementation, including the following:**







# Where fintech meets ESG?

Enhancing know-your-customer (KYC) capabilities to incorporate ESG variables and improve client lifecycle management.

Developing platforms to collect and analyze ESG data for governance, risk, and compliance purposes.

Lending to organizations looking to make ESG-related changes to their operations (e.g., to reduce GHG emissions).

Improving climate risk assessment for investing and insurance purposes.

Creating tools to conduct portfolio risk analysis and measurement related to ESG.

Providing support and infrastructure for carbon tracking, measurement, and trading.

Alternative energy, cleantech, or the transition to net zero.



## How fintech ESG solutions streamline ESG regulation

Developing ESG scoring models, analytics platforms, and reporting tools that assess companies' ESG performance based on standardized metrics and guidelines.

Enhancing transparency, comparability, and credibility in ESG analysis, enabling investors to make informed decisions and drive sustainable outcomes.

Fintech platforms often integrate data from multiple ESG frameworks to provide comprehensive ESG assessments, catering to the diverse needs of investors and stakeholders.

**Various technologies and solutions will be required to power the significant upcoming transition.**

**Cloud Migration**

**Advanced Analytics**

**Artificial Intelligence (AI)**

**Machine Learning**

**Blockchain**

Solutions to collect, analyze, and drive actionable insights and accurate reporting, or to support credible carbon emissions trading regimes and mechanisms to track value chain activities





**TIAC'S SKILLS, EXPERTISE, AND  
INNOVATIVE APPROACH  
STREAMLINE TECHNICAL  
END-TO-END ESG SOLUTION  
DEVELOPMENT**



The financial industry has experienced a substantial increase in ESG reporting and climate risk assessment requirements in recent years. Regulations such as the Sustainable Finance Disclosure Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD) have introduced complex compliance challenges for financial institutions. These organizations now face the task of accurately reporting on a wide range of ESG factors, calculating ESG-related risks, and projecting climate-related impacts on their portfolios, all while adhering to multiple regulatory frameworks.

In response to this evolving landscape, financial technology companies have begun developing standalone ESG solutions to streamline reporting and compliance processes and to enable financial institutions to make risk-calculated decisions.

As their trusted technology enabler and a long-standing partner, TIAC was approached by several clients in the AssetTech, InsurTech, and WealthTech to leverage its understanding of the fintech landscape and expertise in developing fintech products to create comprehensive ESG risk modeling and reporting platforms.

These solutions aim to assist various financial institutions, including banks, asset managers, insurance companies, and wealth management firms, in meeting their ESG reporting obligations, conducting climate risk projections, performing risk modeling, and deriving actionable insights from sustainability data.



## Inception

The projects originated from the increasing regulatory requirements for ESG reporting and risk assessment in the US, EU, and global markets. The fintech clients conducted thorough analyses and developed detailed project specifications, including various proprietary mathematical models to address these challenges. The proposed solutions aimed to integrate advanced features such as scenario-based modeling, risk analytics, and data visualization tools, focusing on climate-related risks and ESG compliance. These systems aimed to utilize data from multiple suppliers to enhance predictive capabilities and provide stakeholders with comprehensive insights into their ESG-related risks and compliance status.

Due to the projects' technical complexity and scale, the clients engaged TIAC, their established technology partner, for end-to-end implementation and architecture of the solutions. TIAC's prior experience with fintech corporates and startups on various projects made it an ideal choice for these initiatives.

TIAC and the clients collaboratively outlined product development roadmaps for solutions designed to help financial institutions navigate current and future ESG regulations. These plans incorporated features such as:

1. ESG factor calculation and reporting systems
2. Climate risk integration into financial models
3. Natural disaster risk assessment tools
4. Dashboards presenting risk analytics
5. Multi-regional regulatory compliance mechanisms
6. Scalable architectures adaptable to regulatory changes
7. Data integration from specialist providers for enhanced analytics

The approach aimed to create platforms capable of maintaining relevance and effectiveness as regulations and risk assessment methods evolve.

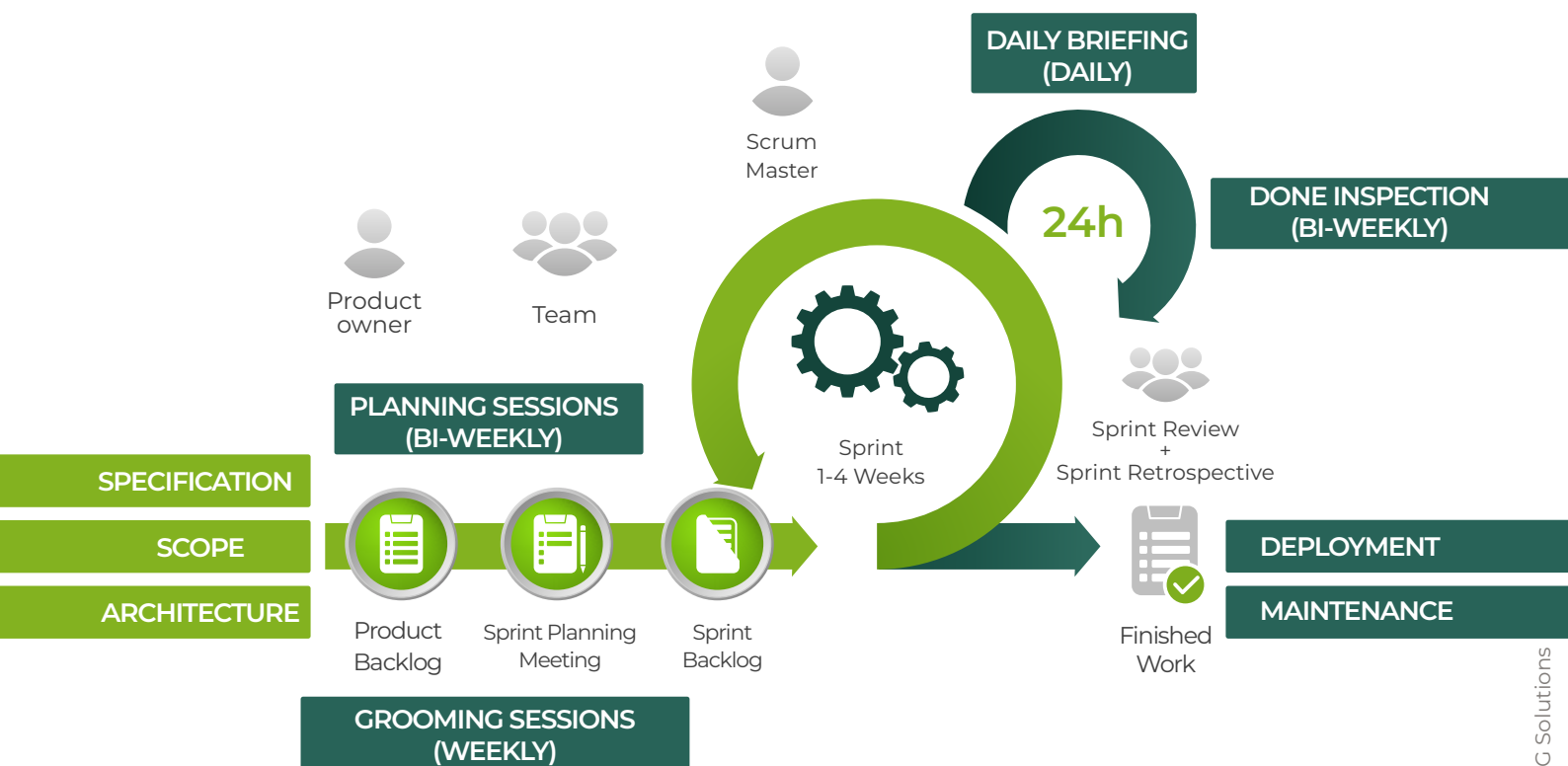




## Methodology

TIAC employed a collaborative and agile methodology, working closely with clients' business, regulatory, and technical teams to facilitate the development of ESG solutions. The agile approach ensured an iterative process where modules were refined incrementally to align with project plans and regulatory deadlines.

Feedback integration was a key aspect of TIAC's methodology. Regular updates were provided to stakeholders to monitor progress, address blockers, and outline future plans. This structured and communicative approach ensured the development of robust, user-friendly solutions that met regulatory requirements.



## Development

The development of the ESG projects progressed through several key stages, starting with the deployment of a minimum viable product (MVP) and followed by continuous updates to integrate additional functionalities and meet user requirements. The applications were built on a cloud-based infrastructure to enhance scalability and accessibility, with a focus on providing user-friendly interfaces.

## Project team

The project teams consisted of industry and regulatory experts from the client side, working alongside a team of various technical specialists on the TIAC side. This multidisciplinary team developed an end-to-end solution covering logic, calculations, data extraction and input, visualizations, frontend development, and multiple APIs to support the infrastructure.



## Technologies



## Outcome

Over the course of several years, TIAC has successfully collaborated with and developed comprehensive ESG compliance solutions for its fintech clients. These platforms offer versatile, all-in-one toolsets that address various aspects of ESG risk assessment, climate change impact analysis, and regulatory compliance. The modular nature of these solutions allows for both broad and industry-specific applications, ensuring adherence to evolving standards while maintaining robust security protocols. Following their launch, these platforms have begun onboarding clients, providing user-friendly interfaces that present detailed risk analytics based on client data.

This allows stakeholders to gain comprehensive insights into ESG-related risks affecting their assets. The success of these initiatives stems from close collaboration between the technology provider, its clients, and industry experts, ensuring alignment with sector standards and regulatory requirements. These adaptable solutions are well-positioned to meet the growing ESG compliance needs in the fintech sector, offering valuable resources for risk evaluation and informed decision-making that balance business objectives with regulatory obligations.

## Commercialization

The successful launch and positive reception of the ESG compliance platforms have paved the way for ambitious commercialization strategies. Leveraging the established market position and extensive client networks of the parties involved, these solutions are poised to expand their user base beyond initial adopters to serve a broader market segment. The platform's success has even led to the creation of a dedicated spin-off entity focused on ESG software solutions, with TIAC continuing its role as the primary technology enabler.

Looking ahead, TIAC will support the ongoing development and enhancement of these platforms. This includes expanding the range of ESG metrics covered, refining existing features, and adding new capabilities based on user feedback and evolving regulatory requirements.

The focus areas for future development encompass a wide spectrum of ESG-related functionalities, from risk scoring and taxonomy alignment to stress testing and emissions calculations. Through continued collaboration with clients, TIAC aims to ensure these platforms remain at the forefront of ESG technology solutions, effectively addressing the complex challenges of ESG implementation in the financial sector.



**>1,000**  
Bilion €

analysed total assets

**9**

modules

**100+**

satisfied customers

**193**

countries worldwide  
coverage

**“TIAC’s engineering team integrated seamlessly with our ESG experts. Together we built a fully cloud native, enterprise grade solution, that performed exceptionally well in a highly competitive environment.”**

*Christian Fruehwirth, Partner KPMG Austria*

## Our approach to innovation and staying competitive

TIAC has a system of knowledge and change management developed by an in-house R&D unit whose mission is to ensure that the entire organization constantly innovates, creates new knowledge, and builds expertise levels.



Reducing uncertainty by having an effective information and knowledge flow



Building new skills and competencies for the future



Exploring technical and business trends and developments





**WHAT MAKES TIAC A DESIRED  
TECHNOLOGY ENABLER FOR  
FINANCIAL INSTITUTIONS AND  
FINTECHS?**



Our

**90%+**

staff retention is regarded as a key benefit to existing clients.

## Our brief

TIAC is a software company operating in the field of financial technologies focused on bringing efficiency, innovation, and the highest development standards. This is achieved by applying innovative methodologies and technologies, and by implementing efficient internal processes.

Partnering with some of the biggest names in transactional systems worldwide, we have gained abundant experience in various technological domains, with a particular focus on products and services in the FinTech and ESG sectors.

**We primarily collaborate with corporate clients in the financial or fintech sectors with B2B and B2B2X business models and operating in**

**WealthTech**

**AssetTech**

**InsurTech**

## With our clients, we have delivered

- ▶ Trading systems
- ▶ Insurance risk modeling systems
- ▶ Custom APIs
- ▶ ESG modeling and analytics systems
- ▶ and other fintech/ESG solutions along with many successful software migration projects (on-prem to cloud/multi-cloud)



## Have Questions?



For ESG solution development  
reach out to

**Mita Stojic,**

**TIAC's Executive Director**  
**[mita.stojic@tiacgroup.com](mailto:mita.stojic@tiacgroup.com)**



If you have an unspecified technical  
problem reach out to

**Vladimir Mandic,**

**TIAC's Chairman and R&D Director**  
**[vladimir.mandic@tiacgroup.com](mailto:vladimir.mandic@tiacgroup.com)**





## Why extend teams to Serbia?

- By far the largest net exporting industry of the country, with annual exports of over 3,44 Billion Euros in 2023, growing over 26% annually (CAGR) for the past 11 years.
- Serbia has 3rd fastest growing ICT export in Europe in 2016-2022.
- Financial Times has ranked Serbia #1 in the world in greenfield FDI performance, two times in the last 3 years.
  - According to Financial Times: Serbia is "punching almost at 12 times above its weight" in attracting foreign direct investments.

## Fintech, automotive, and gaming are among the primary ICT industries

Serbia introduced two regulatory sandboxes so far. Within FinTech sandbox, innovative payment solutions can operate in limited market with only supervision instead of full registration.

## Strong education and entrepreneurial mindset leads to a highly talented workforce

- Engineering excellence & available talent
- Traditionally strong STEM education
- Shanghai Ranking 2023, University of Belgrade: 301-400; Physics 301-400
- Compulsory coding curriculum starting in 5th grade: Scratch, Python, Pygame, Jupyter
- English Proficiency Index 2023: High Proficiency
  - (24th out of 113 countries, Belgrade 19th among cities)



## References

1. ESG and FinTech: Are they connected?, Graziana Galeone, Simona Ranaldo, Antonio Fusco
2. Fintechs and the ESG Data Challenge, BNP Paribas
3. How Financial Services Firms Are Wrestling with ESG, Bain & Company
4. The emergent ESG Fintech ecosystem, KPMG Singapore
5. ESG data governance: A growing imperative for banks, McKinsey
6. ESG risks in banks, KPMG International
7. EY European ESG FinTech Landscaping, EY Parthenon
8. FinTech: The Notorious E.S.G, Hogan Lovells
9. Four ways technology can contribute to business sustainability plans, EY
10. How will ESG FinTech develop over the next five years?, Fintech Global
11. Six key challenges for financial institutions to deal with ESG risks, PwC
12. The Intersection Of Fintech And ESG, Forbes
13. ESG in Fintech: An Overview, IT University in Copenhagen
14. Unlocking the ESG Power of Fintech, ESG The Report
15. Fintech, Sustainability, and ESG reporting: Is now the time for fintechs to become early movers in adopting a formal ESG strategy?, Deloitte
16. What Is ESG Performance And How To Measure It?, KnowESG
17. Measuring the Immeasurable: Scoring ESG Factors, Goldman Sachs Asset Management

Organization: **TIAC, DOO**

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# TIAC AMPLIFIES PRODUCT DEVELOPMENT AND ACCELERATES TIME-TO-MARKET



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