

Syensqo The Hub-GBS Space

Status	
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Issue

The essential building blocks for CSRD reporting are based on tools from many vendors and Syensqo's existing technology. It requires combining into a solution for ESG reporting going forward. A decision is required on the long term solution post the implementation of RFI ESG Disclosure and Performance in 2024.

A long-term solution is required to effectively manage sustainability initiatives to support achieving Syensqo's environmental goals.

Recommendation

The recommendation is the implementation of SAP Sustainability Control Towers. SAP SCT is better suited for Syensqo with a strong focus on sustainability management due to its specialised features, seamless integration with the SAP and robust compliance and reporting tools. SAP SCT is the stronger solution for a larger organisation seeking a comprehensive, integrated solution that covers a wide range of sustainability metrics, advanced analytics, and industry-specific needs.

Background & Context

RFI on ESG Disclosure and Performance was launched in 2024 to consolidate all Sustainability data in one place, create reporting layer and insights layer on top. The RFI is aiming at a one to two year contract, which is to be revisited with ERP Rebuild. Demos have been presented by SAP in 2024 to the business together with PWC. RFI supported by KPMG experience with other clients and finalised in **July 2024** based on 2.5 weeks response time for providers to answer by mid June 2024. **June/July 2023 Go-No Go decision.**

The required capabilities are:

- Centrally managed calculations. Avoid large proportions of pre-calculation in various source systems across the landscape.
- Centralisation of ESG data and reporting.
- Long term solution commitment.
- Annual or quarterly reporting metrics.
- Leverage of AI where beneficial.

Process

1. Assess metrics and data: Prioritise ESG topics based on risks and issues
2. Automated data collection and preparation: data capture for emissions and ESG reporting
3. Centralised ESG data: granularity
4. Metric calculation: aggregation and calculation of scope 1, 2 and 3 emissions and other ESG metrics
5. Sustainability tracking via analytic insights (including visualisation) and reports and disclosures (multiple frameworks)
6. Sustainability initiatives based on actions and ESG compliance

The process is driven by a variety of internal and external data sources, which need control, tracing and verification.

Functional architecture

The following tools are data sources for storage and consolidation (automated or manual). Enrichment with external data may also be required. Metric calculations should make use of AI generated insights.

Design/R&I:

1. Project portfolio
 2. LCA
- WeGo (accolade)
 - Simapro/Gabi
 - **Fast LCA, checklist**

Sustainable procurement (**STP -Supply Tracking and Prioritisation**):

1. Bio and recycled based raw material tracking (SAP - **Green Token material origins?**)
2. Human rights due to diligence (Ethixbase)
3. Carbon footprint sharing (Sigreen)

Manufacturing:

1. Carbon scope 1 and 2 (SAP Green Ledger, **other?**)
2. Emissions reporting (**SAP EHS Emissions Management**)
3. Waste reporting (SAP EHS Waste Management)
4. Water reporting (**tbc - not readable on slide 4**)
5. Star Factory project portfolio (Wave, Gensuite)
6. Accident reporting (Gensuite)
7. CAPEX tracking (**SAP Finance, Colmar**)

- **Cerise (redundant)**

Supply Chain:

1. Carbon scope 3 (SAP)

- **EcotransIT**
- **Concur**
- **BW Tiers**

HR:

1. Diversity, Equity, Inclusion (DEI) (SAP SuccessFactor)
2. Training and performance (xls offline)
3. Gender pay gap (**Payroll**)
4. Living wages (**Payroll**)

Business:

1. Marketing (Sustainability Portfolio Management - SPM)
2. Inventory (SAP Product Compliance: Substances of Very High Concern - SVHC)
3. Life Cycle Analysis (LCA - tbc)

- **PCF - redundant?**

Greenomy

smaller scope plus AI as an option to combine with other tools for supplier interaction and environmental accounting. **Risk of remaining a spot solution for compliance.** Greenomy as short term solution, plug and play, so not overspend. Quickest time for return, off the shelves. For various reasons not signed in August yet. Committee will sign off in September 2024.

SAP Sustainability Control Towers (SCT)

Launch of 2024 RFI on ESG Disclosure and Performance was extended to SAP. 2024 RFI response by SAP not satisfactory with off the shelf slide pack containing access issues to links. **SAP Sustainability Control Towers (SCT) currently not mature enough, but could be revisited in three years. Scope, AI and insights not good enough.**

ESG data, elements on basic reporting using tools creating KPI library. This should be covered by SAP. SAP lacks enhancement of this data SAP i. e. reporting layer including e.g. KPIs, emission factors as per tool Ecoinvent and Ecotransit. For example carbon accounting.

Pureplayers look into public data where plant data is missing, to make assumptions where there is gaps. Other functionality, AI native pureplayer is integrated benchmark. Competitors in tool for KPIs in market based on public information. SAP solution does not cover this. No company in manufacturing uses the Sustainability Control Towers.

Disclosure SCT was not to be solution.

very limited AI, no disclosure tool, would require interface, requires custom integrations until S/4 is implemented. S/4 will bring SCT features.

Roadmap?

SAP overestimated level of integration which may be issue for disclosure. Marginal only if Green Token or Green Ledger were implemented. Emissions is game changer where solution is.

Emissions mgmt in S4 would swing decision closer to SCT.

SAP datasphere has no prepackaged off the shelf data for sustainability.

Possible to use Fabric as datalake, then SCT on top.

Microsoft Sustainability and Fabric.

Queried during RFI. Performance was promising. Proof of concept in Taveau site launched last week for 2 months. Goal to automate the calculation and gathering, traceability of 20 environmental KPI from SERF. Technical feasibility to create some insights. Does it need to integrate with S4. no emissions in SAP at the moment. Integrates with MES system now based on data lake project where data collected by sensor. Data lake Startek. Idea is to collect water flow taking flow combined with Labware for analytical with pollutant, results in KPI as Microsoft had pre-packaged solution.

Fabric has many more functionalities. KPI library in Sustainability. Its just performance. In relation to disclosure look to Microsoft Purview compliance Manager. SCT is last mile disclosure. Possible to use Fabric as datalake, then SCT on top. Maybe separate Disclosure and Data e.g. KPI library. Could also put Greenomy on top of Fabric. SAP Datasphere is an option instead of Microsoft datalake. Microsoft cloud may be good move with regards to Microsoft workstations.

Embedded AI capabilities superior.

Pilot in autumn to test automation of environmental metrics and modelisation for data cleaning and then consume clean data on corporate level.

Automation can obtain consistent data and metrics to pinpoint sustainability issues in real-time. Tech-enabled governance of the reporting process can manage complexity and risk.

Pure/Gensuite vs S4. scop 1-3 about 20 metrics, 15 in scope 3. Validation workflow most important.

not advanced enough for reporting (no CPD, taxonomy etc), lack of integration. Syensqo leaning more towards Microsoft.

PAPM (SAP) currently used for tax purposes by Finance in scope of ERP Rebuild to deal with complex reporting requirements. Might be an option to cover circularity for Sustainability. SPM may not be the way forward as missing master data. **Additional option?**

Financial transactions are influenced by carbon emissions, which is also related to energy purchase and energy consumption. Should be able to rely on financial transaction. That is how Cerise was designed with transactional financial transactional flow. **Good idea to move carbon accounting into SAP as finance project.**

Economic accounting and carbon accounting same: buy raw materials, production, transport, man power, waste.

Supports promotion of sustainable capital flows for sustainable enterprises. ISAB set standards in combination with IFRS requires sustainability standards and disclosures. EU policy CSRD different to US, China, but all are influenced by TCFD framework established 2025, which used by global investment companies e.g. Black Rock.

TCFD

Climate related financial disclosure:

Structural assessment of CAPEX impact. Forecast of financial impact of sustainability impact.

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Needs access and transparency in one central place in the company. Currently spread throughout the company in complex landscape. Solution SCT for holistic steering and reporting on aggregated/periodic level.

SAP SFM enables to automate the data collection at more granularity. e.g. scope 3.1 which can make up 80% of emissions. SAP SFM connects to ERP system e.g. goods receipt, goods issue, suppliers, products purchased, assigns emission factor. Results in footprint extraction possible. Eventually solution can calculate corporate and product footprints. basis for SCT.

Supplier footprint often manual currently, no standard footprint sharing, error prone. SAP Sustainability Data Exchange publishes and makes available footprint to the network.

Finance dimension covered by Green Ledger. What is the footprint impact on balance sheet, assets, cost centres, budgets. Consolidates financial and sustainability data.

SAP EHS Environment for collection data from smart meters and other device.

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Ambitions:

SCT showing trends, targets.

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SFM:

One step deeper in granularity. Shows emissions for purchased and sold goods. Can also calculate product footprints. System knows greener footprints by adding products used to e.g. build a car. System extracts data from ERP via BOM with all components needed to build a car. e.g. calculate costs. Can assign certain footprints to materials in BOM, like already done with costs, also using SAP EHS. Includes assigning footprints to activities e.g. car assembly line.

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Data can be published back from SFM into S/4HANA and post green ledger journal entry. If product sold, post finish goods account and debit COX account. Same for sustainability. Takes calculated data from SFM, takes it and posts it in Green Ledger. Can analyse finance and sustainability data in one dashboard. Adds additional dimension to enterprise performance management over and above regulatory and standard requirement to report on sustainability.

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CSRD for FY2024 more granularity of information.

Green Ledger does not calculate footprints. It relies getting them from another source e.g. SAP SFM.

Green Ledger data reporting via Fiori UIs or SAC to make data accessible. Green Ledger is a data repository, which can be seen in Fiori apps, SCT, Datasphere etc, similar to finance processes.

Green Ledger posted to cost centres or business segments/company code level, which are available for reporting. Enables simulations exchanging a material inhouse production or external sourcing, supports decision making as such.

Green Ledger data format for external regulation requirements can be achieved. Asset or CAPEX accounts with emissions for data preparation for e.g. CSRD via SAP SCT. Can model and structure KPIs in SCT, which can then be sourced from Green Ledger to calculate and fulfil requirements. From SCT with disclosure management tool into XPRL format to send to authorities.

There are elements of Green Ledger that sit in ACDOCA table universal journal in S/4HANA core. Other elements are outside. Product costing entry will be enhanced with Green Ledger, new object universal component breakdown, new input in product costing entry, which sits in ACDOCA table. Green journal entries are outside technically. As business user no difference.

More info:

<https://www.sap.com/assetdetail/2023/...> <https://www.sap.com/events/sapphire/n...> <https://www.sap.com/sustainability.html>

Assumptions

Implementation of related SAP Sustainability functions to support SCT.

Constraints

Technical Constraints:

1. Data Integration:
 - Complexity: Integrating data from various sources, including SAP and non-SAP systems, can be complex and time-consuming.
 - Data Quality: Ensuring data accuracy, consistency, and completeness is a significant challenge, especially when dealing with large volumes of data from disparate sources.
2. System Performance:
 - Scalability: As the volume of data and the number of integrated systems grow, maintaining system performance and scalability can become challenging.
 - Real-Time Processing: Real-time data processing and analytics require robust infrastructure and may face latency issues.
3. Customization and Configuration:
 - Flexibility: Customizing and configuring SAP SCT to meet specific business requirements can be complex and may require specialized expertise.
 - Upgrades and Maintenance: Regular updates and maintenance can introduce compatibility issues and require careful planning and execution.

Impacts

SAP Sustainability Control Tower (SCT) integration involves connecting various SAP and non-SAP systems to provide a comprehensive view of Syensqo's sustainability performance. This integration enables real-time data collection, advanced analytics, and reporting to support sustainability initiatives.

1. SAP ERP and S/4HANA:
 - Integrate with core ERP systems to gather data on resource usage, production processes, and financial metrics.
 - Leverage existing data structures and processes to ensure consistency and accuracy.
2. SAP Environment, Health, and Safety (EHS):
 - Connect with SAP EHS to monitor and manage environmental compliance, health, and safety data.
 - Use EHS data to track hazardous materials, emissions, and waste management.
3. SAP Supply Chain Management (SCM):
 - Integrate with SCM to monitor the sustainability performance of suppliers and logistics partners.
 - Track the carbon footprint and resource usage across the supply chain.
4. SAP Ariba:
 - Connect with SAP Ariba for sustainable procurement and supplier management.
 - Ensure that suppliers meet sustainability criteria and track their performance.
5. SAP SuccessFactors:
 - Integrate with SAP SuccessFactors to manage employee training and certification related to sustainability practices.
 - Track employee engagement and participation in sustainability initiatives.
6. SAP Analytics Cloud (SAC):
 - Use SAC for advanced analytics, reporting, and dashboarding.
 - Visualize sustainability data and generate insights to support decision-making.
7. Internet of Things (IoT) and Sensors:
 - Integrate IoT devices and sensors to collect real-time data on energy consumption, emissions, and resource usage.
 - Use IoT data to monitor and optimize sustainability performance.
8. Third-Party Systems:
 - Connect with non-SAP systems and external data sources for a holistic view of sustainability performance.
 - Use APIs and data integration tools to ensure seamless data flow.

Business Rules

The management of business rules supports sustainability initiatives to be more effective, compliant, and aligned with their strategic objectives. It enables continuous monitoring, optimization, and improvement of sustainability performance.

1. Data Collection and Validation:

- Define rules for data collection from various sources, ensuring data accuracy and completeness.
 - Implement validation checks to ensure data integrity and consistency.
2. Performance Metrics and KPIs:
 - Define key performance indicators (KPIs) for sustainability initiatives (e.g., carbon footprint, energy consumption, water usage).
 - Set targets and thresholds for each KPI to monitor performance against sustainability goals.
 3. Resource Optimisation:
 - Establish rules for optimising resource usage, such as energy efficiency, water conservation, and waste reduction.
 - Monitor resource consumption and implement corrective actions when deviations occur.
 4. Scenario Planning and Forecasting:
 - Define rules for scenario planning and forecasting to evaluate the potential impact of different sustainability strategies.
 - Use predictive analytics to forecast future sustainability performance based on current trends.

Examples

- Energy Consumption: Monitor energy consumption across all facilities and compare against predefined targets.
- Carbon Emissions: Calculate carbon emissions for each production process and ensure compliance with emission limits.
- Water Usage: Track water usage in manufacturing processes and identify opportunities for conservation.
- Waste Management: Monitor waste generation and disposal practices to ensure compliance with waste management regulations.
- Supplier Sustainability: Evaluate supplier sustainability performance based on predefined criteria (e.g. environmental impact).

Options considered

Option A: SAP Sustainability Control Towers (SCT)

SAP SCT is a centralised platform designed to monitor, manage, and optimize sustainability initiatives across an organization. It leverages data analytics, real-time monitoring, and integrated systems to provide a comprehensive view of an organisation's sustainability performance.

Capabilities

1. Real-Time Data Monitoring:
 - Collect and analyze data from various sources, including IoT devices, sensors, and enterprise systems.
 - Monitor key sustainability metrics such as energy consumption, carbon emissions, water usage, and waste generation in real-time.
2. Integrated Systems:
 - Integrate with existing enterprise systems like ERP, supply chain management, and environmental management systems.
 - Ensure seamless data flow and consistency across different departments and functions.
3. Advanced Analytics and Reporting:
 - Use advanced analytics to identify trends, patterns, and anomalies in sustainability data.
 - Generate detailed reports and dashboards that provide insights into sustainability performance and progress towards goals.
4. Predictive and Prescriptive Analytics:
 - Employ predictive analytics to forecast future sustainability impacts based on current trends.
 - Use prescriptive analytics to recommend actions and strategies to improve sustainability outcomes.
5. Compliance and Risk Management:
 - Ensure compliance with environmental regulations and standards.
 - Identify and mitigate sustainability-related risks, such as supply chain disruptions or regulatory changes.
6. Scenario Planning and Simulation:
 - Conduct scenario planning and simulations to evaluate the potential impact of different sustainability initiatives and strategies.
 - Make informed decisions based on simulated outcomes.
7. Stakeholder Engagement:
 - Facilitate communication and collaboration with stakeholders, including employees, customers, suppliers, and regulatory bodies.
 - Share sustainability performance data and progress with stakeholders to build trust and transparency.

Benefits

1. Enhanced Visibility:
 - Gain a holistic view of the organisation's sustainability performance, enabling better decision-making and strategic planning.
2. Improved Efficiency:
 - Optimise resource usage and reduce waste, leading to cost savings and improved operational efficiency.
3. Regulatory Compliance:
 - Ensure compliance with environmental regulations and standards, reducing the risk of fines and penalties.
4. Risk Mitigation:
 - Identify and address sustainability-related risks proactively, minimizing potential disruptions and negative impacts.
5. Increased Transparency:

- Provide stakeholders with transparent and accurate information about sustainability initiatives and performance.
6. Strategic Advantage:
- Enhance the organization's reputation and brand value by demonstrating a commitment to sustainability.
 - Gain a competitive edge by adopting sustainable practices that appeal to environmentally conscious consumers and investors.

Use Cases

1. Supply Chain Sustainability:
 - Monitor and optimise the sustainability performance of suppliers and logistics partners.
 - Ensure sustainable sourcing and reduce the carbon footprint of the supply chain.
2. Energy Management:
 - Track and manage energy consumption across facilities.
 - Implement energy-saving initiatives and renewable energy projects.
3. Waste Management:
 - Monitor waste generation and disposal practices.
 - Implement waste reduction and recycling programs.
4. Water Management:
 - Track water usage and identify opportunities for conservation.
 - Implement water-saving technologies and practices.
5. Carbon Footprint Reduction:
 - Monitor and reduce greenhouse gas emissions.
 - Implement carbon offset projects and renewable energy initiatives.

"The Control Tower gives the impact overview, the Footprint gives the detail, but it is still using business averages to gauge how much carbon is being produced. The aim is to help to move away from averages and start using actuals, to start getting sight of actual data from suppliers, and their suppliers' suppliers.

It's here that SAP really 'begins to differentiate on a global level'. The Data Exchange will become a standard-setting engine that allows businesses to exchange data, securely, across value chains, thus unlocking 'the carbon calculation of impact'.

While both SAP SCT and Greenomy offer valuable capabilities for sustainability management, SAP SCT may be better suited for large enterprises seeking a comprehensive, integrated solution that covers a wide range of sustainability metrics, advanced analytics, and industry-specific needs. Greenomy, on the other hand, excels in sustainability reporting and compliance, particularly within the context of the EU Taxonomy, and may be more suitable for organizations primarily focused on these aspects.

Ultimately, the choice between SAP SCT and Greenomy will depend on your organization's specific requirements, existing technology stack, and strategic goals. It may be beneficial to conduct a detailed assessment and possibly a pilot implementation to determine which platform best meets your needs.

Option B: Microsoft Fabric

Option C: Greenomy - Do nothing

Greenomy, on the other hand, excels in sustainability reporting and compliance, particularly within the context of the EU Taxonomy, and may be more suitable for organizations primarily focused on these aspects.

Evaluation

	Option A - SCT	Option B - Microsoft	Option C - Greenomy
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Compliance	<ul style="list-style-type: none"> + Pro - Con <p>Not known when S4/HANA modules will be implemented as part of ERP Rebuild project timeline. Can the business wait for this long?</p>	<ul style="list-style-type: none"> + Pro + Pro 	<ul style="list-style-type: none"> + Strong sustainability reporting and compliance features. + Specializes in sustainability reporting and compliance, particularly in the context of the EU Taxonomy and other regulatory frameworks. - May not offer the same breadth of compliance features across different regions and industries as SAP SCT.
Integration	<ul style="list-style-type: none"> + Strong integration with other SAP solutions like SAP SFM, SAP EHS, SAP Ariba, and SAP SuccessFactors. + Ensures a unified approach to sustainability across various business functions, leveraging existing SAP infrastructure and data. + Leverages advanced analytics and predictive capabilities tailored to sustainability metrics. + Uses SAP Analytics Cloud for in-depth analysis, scenario planning, and forecasting specific to sustainability goals. - Con 	<ul style="list-style-type: none"> + Powerful data integration and analytics capabilities. + Versatile data integration and analytics platform that can be customized for a wide range of business needs, including sustainability. - Integrates well with Microsoft's ecosystem, including Azure, Power BI, and Dynamics 365, but may require additional customization and integration efforts to work seamlessly with SAP systems. - Provides strong analytics capabilities through Power BI and Azure Synapse, but these may require additional configuration to focus specifically on sustainability metrics. - May require additional effort to achieve the same level of specialisation as SAP SCT. 	<ul style="list-style-type: none"> + Pro + Pro - May not provide the same level of integration with broader enterprise systems and processes i.e. SAP. - Whilst Greenomy can integrate with various systems, it may not offer the same depth of integration with SAP's comprehensive suite of enterprise solutions.
Business Impact	<ul style="list-style-type: none"> + Specifically designed to manage and optimise sustainability initiatives. + It provides comprehensive tools for tracking, analysing, and reporting on sustainability metrics such as carbon emissions, energy consumption, water usage, and waste management. + Designed to scale with large enterprises, hence can handle complex and extensive sustainability data across multiple business units and geographies. 	<ul style="list-style-type: none"> - More general-purpose platform and may not have the same depth of specialised features for sustainability management. - It is more of a general-purpose platform and may not offer the same level of industry-specific customisation for sustainability. <p>Microsoft Fabric, on the other hand, is a versatile data integration and analytics platform that can be customized for a wide range of business needs, including sustainability, but may require additional effort to achieve the same level of specialization.</p>	<ul style="list-style-type: none"> - May not provide the same level of advanced analytics and predictive capabilities as SAP SCT. - Does not offer the same level of industry-specific customization and solutions as SAP SCT. - Lower level of scalability and flexibility for large, complex organizations as SAP SCT.

See also

File	Modified
Multimedia File Solvay One FSL.mp4	Jan 27, 2021 by Gu-gay, Liying

Change log

Version	Published	Changed By	Comment
CURRENT (v. 27)	Sept 02, 2025 10:21	LI, Qiaosi (Joice)	
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