

[IAP] Intelligent Asset - IoT Hub Secure 2023



Initiative brief



Readme

* Required information

Project details

Phase 1:

Envision - High level initiatives

- First, let's start with the Problem space

- 1.1. Reason
- 1.2. Benefits
- 1.3. Target users
- 1.4. Value proposition
- 1.5. Business goals
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Phase 2:

Strategize

My tasks

Project details

Phase	☒ Envision ☒ Strategize
Status	APPROVED
Start Date	03 Apr 2023
Description of the initiative	IT12287 - IoT Hub Secure 2023 The number of new IoT devices and sites managed on the IoT Hub is scaling quickly (+150 % devices/year) and this number is expected to continue to grow during the next years. Some critical points need to be completed to ensure the security and the stability of the IoT Hub platform. This initiative will focus on the top 3 priorities for 2023. A roadmap has been established with the product team for the next years as well.
Domain & Product	
Requested Domain Journey / Platform	☐ Platf1- Data & Analytics & AI Platform ☐ Platf2 A- Develop, Test & Deploy Platform ☐ Platf2 B- Multi experience Platform ☐ Platf2 C- Ent. Business Systems Platform ☐ Platf3 A- Ecosystem Platform ☐ Platf3 B- Hybrid & Cloud Platform ☒ Platf3 C- Intelligent Asset Platform ☐ Platf4- Info Security and Compliance Platform ☐ Platf5- Workplace Platform ☐ Journ1- Digital Customer Journey ☐ Journ2- Digital Ops & Corporate Enablement Journey ☐ Journ3- Digital Employee Journey ☐ Journ4- Prepare the Future & Connected Research Journey ☐ DTmng3- DT Enablement & Transformation

My tasks



Complete AIA slides for ARB Thierno Gueye

Involved Domain Journey/ Platform	☐ Platf1- Data & Analytics & AI Platform ☐ Platf2 A- Develop, Test & Deploy Platform ☐ Platf2 B- Multi experience Platform ☐ Platf2 C- Ent. Business Systems Platform ☐ Platf3 A- Ecosystem Platform ☐ Platf3 B- Hybrid & Cloud Platform ☒ Platf3 C- Intelligent Asset Platform ☐ Platf4- Info Security and Compliance Platform ☐ Platf5- Workplace Platform ☐ Journ1- Digital Customer Journey ☒ Journ2- Digital Ops & Corporate Enablement Journey ☐ Journ3- Digital Employee Journey ☒ Journ4- Prepare the Future & Connected Research Journey ☐ DTmng3- DT Enablement & Transformation
Initiative Ownership	
Digital Technology Partner	Flavio Ianague
Product Manager / Service Delivery	Jean-Luc Rosse / Alessandro Mainardi Gaëtan Frenoy
Roadmap & Key objectives	
Roadmap	Access the defined priorities
2023 Digital Technology Key objective	2 - Run the business
Priority	P1

Phase 1: Envision - High level initiatives



Do

- Create Envision brief if the initiative is part of the validated roadmap
- Highlight roadmap value
- Request a budget for Strategize if you need one
- [Security scoring](#)
- [RADAR/SENTRI](#)



Don't

- Request platform resources if the business capability is already identified and clear
- Write portfolio epics, epics and user stories
- Identify squad resources

First, let's start with the Problem space

1.1. Reason

* Why is this initiative proposed today?

The number of new IoT devices and sites managed by the IoT Hub is scaling quickly (+150 % of devices in one year) and this is expected to continue during the next years.

Some critical points need to be completed to ensure the security and the stability of the IoT Hub platform and pave the way for future devices growth.

1.2. Benefits

What are the new capabilities expected?

This initiative will focus on the top 3 priorities for 2023 :

- Cybersecurity constraints (action plan following November 2023 pentest and SIP analysis)
- Data exploitation : have a default interface with StarTek & Grafana
- One Stop Shop app : several automations are missing and require a lot of human error prone actions and therefore limit our capacity to answer the need (in R&I and Industrial):
 - Site/Gateway/MES interfaces/Business Fields/Codec Management
 - Complete integration with existing third party API
 - GEC IIoT devices catalogue synchronization

What will it replace? Is it a new solution or an existing one?

It consists in a set of new features and migration tasks on the existing IoT Hub application.

1.3. Target users

Who are the future users?

IoT Hub is used by 7 GBU, both ECO and SCO and R&I on 36 sites. The changes will be available for all users.

What is the number of users impacted?

Approximately 150 users (technician, engineers, scientists in labs and plants) as well as GEC, Telecom and MES administrators

What about the Business Needs?

1.4. Value proposition

What is the value of the initiative?

Ensuring the stability, security and prepare scalability on the IoT Hub which is mandatory to collect near to real-time data collection and enable Condition Based Monitoring and Predictive Maintenance use cases.

1.5. Business goals

How does the product / deliverable align with the business goals?

Reduce maintenance costs and improve safety by reducing the number of incidents and unplanned operations.

1.6. Challenges

Are there any challenges in developing the product?

Now that many sites rely on the IoT Hub and have the means to purchase and add new sensors autonomously, we need to prepare the platform for further scalability. This needs to be started in 2023 to be ready after the Spin Off and avoid future service interruption.

1.7. Business metrics

How will we measure success?

Reduction of time spent on manual tasks done as part of the application RUN

Reduction of the cybersecurity risks analysis results

1.8. Cybersecurity

Please duplicate [this template](#) in [this folder](#). Then, for the envision phase, answer to the 7 high-level questions in the "Security Scoring" sheet. These questions will help the SIP team to determine the level of cybersecurity & compliance support you will need. Please contact the team by email: @SIP_team@solvay.com

Done in Strategize phase directly

1.9. Up to investment

What is the coherent time to commit on the initiative?*

Estimated Delivery phase start date*	Estimated Delivered end Quarter*
03 Apr 2023	Q4 2023

What is the coherent money to commit on the initiative?*

	2023 (in K€)*	2024 (in K€)*	2025 (in K€)
Estimated size of investment (high level)	100		

What is the coherent run and build commit on the initiative?

Estimated run costs (estimation high level) - on 10Y (if already known)	Type of savings expected /year for DT (Ex: Contracts, FTE, ...)
- Technical infrastructure costs estimation (around 300\$ /month): 35-45 k\$ on 10Y - FTE: 1.5/year	- Reduction of 0.5 FTE/year on internal time and external contracts (for an identical perimeter) - Reduce the dependency on similar tools used locally (Petasense, Niota) that we will one day be able to disable

1.10. Resources

What skills and talents do we need?

[Flavio roberto lanague diniz](#) IAP leader, sponsor
[Gaetan Frenoy](#) Manufacturing product, sponsor (with by [Alessandro Mainardi](#))

[Thierno Gueye](#) IAP Platform Architect
[Jean-Luc ROSSE](#) IAP SDM, project management
[Paul-edouard Koeltz](#) IAP IoT Engineer, project management

Witekio team expertise on IoT Hub and Cloud infrastructure

1.11. Methodology to apply (refer for Accolade)

Do you think if your initiative is compatible with a waterfall approach or with an agile approach?

- ☒ Agile model
- ☐ Waterfall model
- ☐ I do not know at this stage

If the initiative will be done in Agile methodology, please contact during the strategize phase [Nicolas LOVAGNINI](#)

Phase 2: Strategize



Do

- Identify portfolio epics and epics within each portfolio epics
- Create a document / slide / spreadsheet to build your epics and put a link in the brief
- Estimate experts and budget by portfolio epics or by increment
- Show SMART KPI (Specific, Measurable, Achievable, Relevant, and Time-Bound)
- Evaluate the impact on Solvay One Planet objectives



Don't

- Identify squad resources (naming)
- Write user stories

Now, we can move on to the Solution space

2.0 Scope / Deliverables

What is the scope (technical, functional & organizational) / deliverables foreseen?

- Technical:
 - Code update and release
 - Potential migration of internal database type
 - Creation of new technical interface (timeserie database)
- Functional:
 - Cybersecurity constraints (action plan following November 2023 pentest and SIP analysis)
 - Data exploitation : have a default interface with StarTek & Grafana
 - One Stop Shop app : several automations are missing and require a lot of human error prone actions and therefore limit our capacity to answer the need (in R&I and Industrial):
 - Site/Gateway/MES interfaces/Business Fields/Codec Management
 - Complete integration with existing third party API
 - GEC IIoT devices catalogue synchronization
 - Organizational
 - No changes foreseen

2.1. Actions to complete

Mandatory actions * (please contact them together if possible)		
Description of the action / task	Contact	Document & examples (please make your own copy and insert new link here)
Contact each relevant pool lead to book resources in the capacity planning tool ☒ check if possible to generate automated email ARPIN, Florine 06 Jan 2023	ARPIN, Florine	Complete Capacity planning tool Done
Complete Accolade ☒ check if possible to generate automated email Claire Bazin 06 Jan 2023	Claire Bazin	Complete Accolade Done
Review with Enterprise Architect the actual solution answering the objective ☒ check if possible to generate automated email Françoise BERGAME 06 Jan 2023	Françoise BERGAME (Structure)	Complete Architecture Impact Analysis (AIA) ARB & AIA Done
Check you have confirmed the involvement of each platform		Revert to SDM of each Platform Done
Identify security needs (Confidentiality, Integrity, Availability) and define security measures to be implemented by the initiative team ☐ check if possible to generate automated email Benjamin POISSONNET 06 Jan 2023	Benjamin POISSONNET	Complete " SIP Support tool " On going

Support for budget estimation (via the Workload & Cost), Financial evaluation (Total Cost of Ownership over 10Y), saving validation ☐ check if possible to generate automated email Jill Wilson 06 Jan 2023	Jill Wilson	W&C: to be filled in to Accolade in preparation phase TCO over 10Y: Business Case/Financial evaluation 10Y On going
Optional		
If any relation needed with a supplier ☐ check if possible to generate automated email BLANCHER, Alexis 06 Jan 2023	BLANCHER, Alexis user-80091	To be planned
If it concerns a key supplier, a sourcing strategy has to be defined ☐ check if possible to generate automated email Isabelle Auboeuf 06 Jan 2023	Isabelle Auboeuf	N/A
If conformity by design is required ☐ check if possible to generate automated email Emmanuelle Bureau 06 Jan 2023	Emmanuelle Bureau	N/A
If Data Governance is required: identify the business objects ☐ check if possible to generate automated email Philippa de Glanville 06 Jan 2023	Philippa de Glanville	N/A

2.2. Users needs

What do users dislike about the current solution?

Applicable when a new solution is developed

N/A

What tools or features do your users wish to have?

Single interface for all IoT Devices Management, direct dashboarding tool and alerting available in plug and play for all new sensors

What value will it add to the user's lives?

Simplify greatly the Device Management process

Have a dashboarding tool directly available to explore data of each new devices

What alternative do we have?

N/A

2.3. Risk Analysis

What are the risks (refer to Risk analysis matrix in Accolade)?



2.3. Solvay One Planet Objectives

What is the qualitative assessment of Hardware/ Data processing/ Project's contribution to Solvay One Planet?

- Is the business ambition you will support improving or not sustainability? IoT data enables Condition based Monitoring and Predictive maintenance amongst other use cases. This will help to reduce the maintenance costs and improve safety by reducing the number of incidents and unplanned operations.
- Will you increase or decrease the number of hardware we need to operate? How much ? It will allow to manage an higher number of hardware (IIoT sensors) but they are selected by the GEC team to last 10 years
- Will you generate or transfer an important amount of data, especially videos? How much? IIoT data are very low consuming and this initiative will even optimize the storage