Swarm
by BearingPoint®

Utilizing the **Crowd** to gain **Insights**, enabling **Swarm** Intelligence

Whether you want information from an individual (ad-hoc), or to discover communalities and differentiations within a group, it is all about Swarm Intelligence.

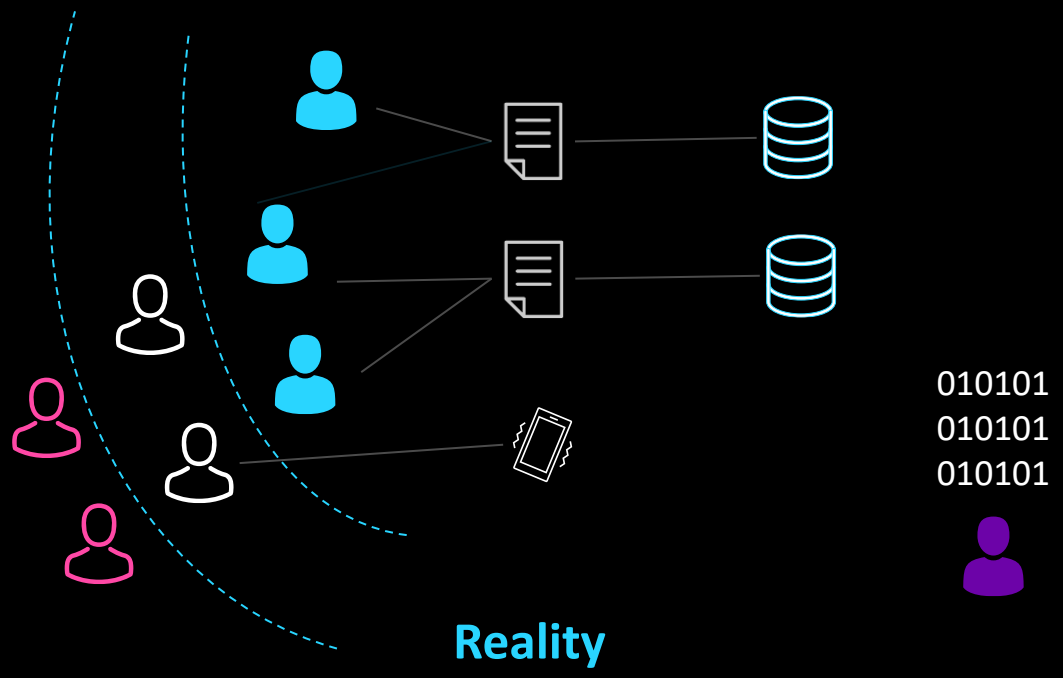
Because not all information is captured in business systems, human observation is required to **complete data sets.** As for example in the IoT field, where humans contribute as “sensors”.

To truly uncover business situations, all this data must be **added in the existing data applications** seamlessly: SAP, Salesforce, IFS, Microsoft and others.

By gathering and building collective knowledge, we build a solid foundation for **further decisions based on Artificial Intelligence.**

Swarm to unlock the potential of distributed information

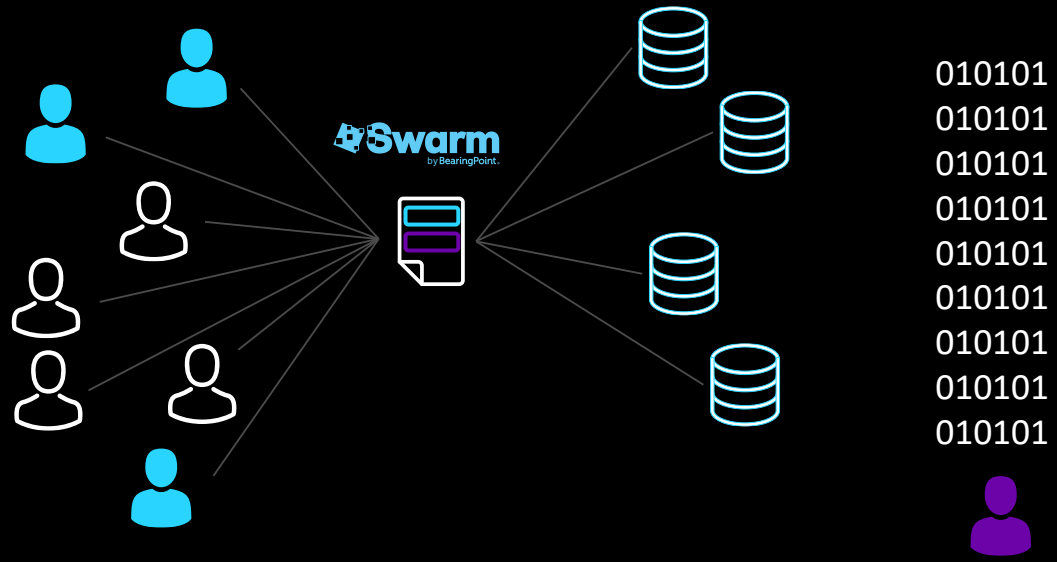
Challenge: Information comes from different sources, only partly collected, with many insights communicated via phone, meetings or email, but not being captured effectively …



Reality

Goal: Business information demands integrated, customized and automated solutions for **gathering** and **leveraging data.**

More relevant people to contribute with information, so that you to have a better decision making.



Swarm it.

Project team, with access to the systems

Indirectly contributing with information

Not contributing at all

Information volume for decision makers

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Swarm – how it works for you

Configure templates and integration to Microsoft

- Access provided to admin platform
- Predefined templates available
- Support provided by BearingPoint on both Microsoft and SWARM side for configuration and automation

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Send out campaigns or use ad-hoc

- Self managing of campaigns, with customization of content and timeframes
- Availability of setting up schedule, recurrence and reminders for forms
- New templates can be configured

Customer

Collect input

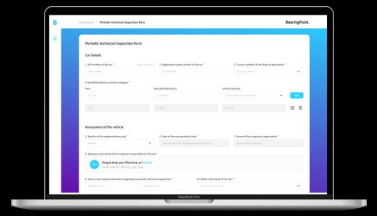
- Data collection is controlled through the setup
- Forms can be filled in either by pre-set individuals or anonymized
- Data collection will be integrated with Microsoft and any other systems.

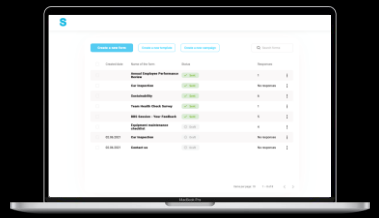
Customer Business Partner

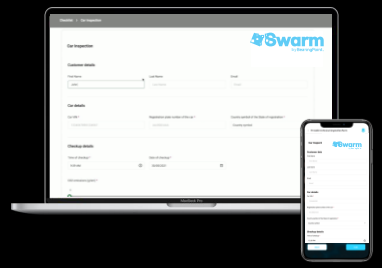
Reports & analytics

- Reports are created, for individual answers or aggregated results
- Analytics are autogenerated for campaigns
- Derive actions from the collected insights

Customer







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Why SmartForms with Swarm?

- Getting more information and people involved, including externals, internals, contractors, inspectors …
- Save time with predefined inspection and compliance templates, easy to fill and flexible to change checklists
- Gain additional insights, both qualitative and quantitative, for a holistic view, beyond time and budget constraints
- Collect structured and categorized data, to lay the basis for better decision making and source of AI
- High flexibility to continuously refine requested information and who should contribute
- Connected to your existing systems (it’s not yet another silo in your IT landscape)

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Examples of use cases

Take advantage of Swarm applicability and elevate it in your company

Operations

Indoor service checks

Enable service technicians to collect high quality data by easing orientation inside your facilities, and by providing accurate data entry input types.

Improve data quality for predictive maintenance with the indoor location service.

Relevant data ingested into the SAP system.

Projects

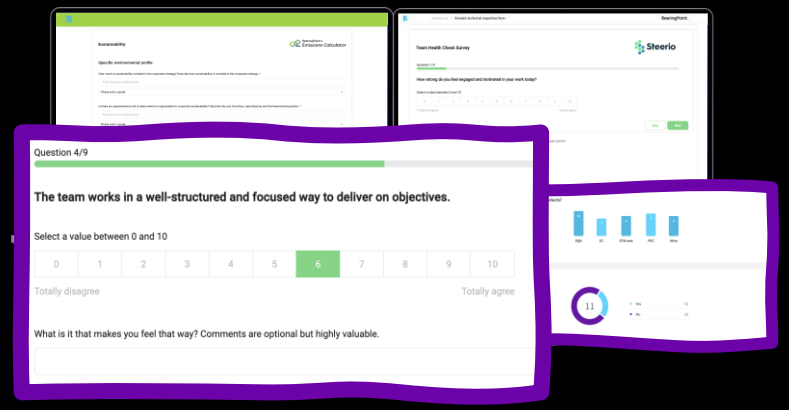
Maturity Assessments & Project Health

Gain valuable insights by accessing the best indicators toward process maturity and project quality

Analyze reports that highlight your strengths and raise awareness for your organization

The assessment will provide you:

- Instant analytics for your assessment entries
- Generate benchmark information
- Project health check including anonymized comparison across teams/peers



Operations

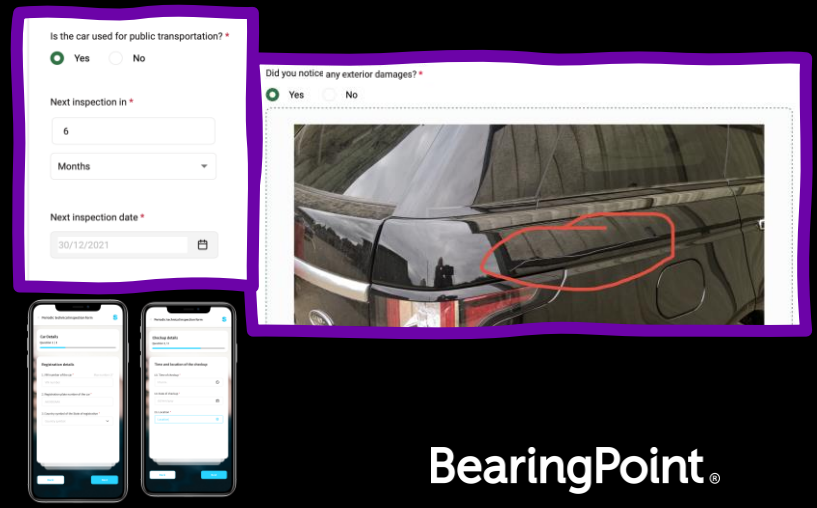
Equipment Inspection Checks

Standardize and industrialize your equipment checks with digitised inspection forms, also accessible offline

Schedule recurring checks to comply in time with legal regulations and internal policies

Automatically prefill information to save time for your service maintenance staff

Offering preconfigured templates for vehicle and industrial equipment checks



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Connectors - Built to securely populate data to core enterprise systems

Swarm acts as a secure gateway to your enterprise systems, so that you never expose your core systems to external access

Data collection

Web, tablet & mobile interface

Data is collected from the end user via the forms generated by Swarm

Link can be shared **directly, via mail or called from API**

Processing

Swarm API

Swarm is collecting, structuring and hosting data.
Transforming data as required by the target system of your company.

Two options

1. Data fully managed and hosted by Swarm
2. Data pushed to your system via connectors

Storing & Analyzing

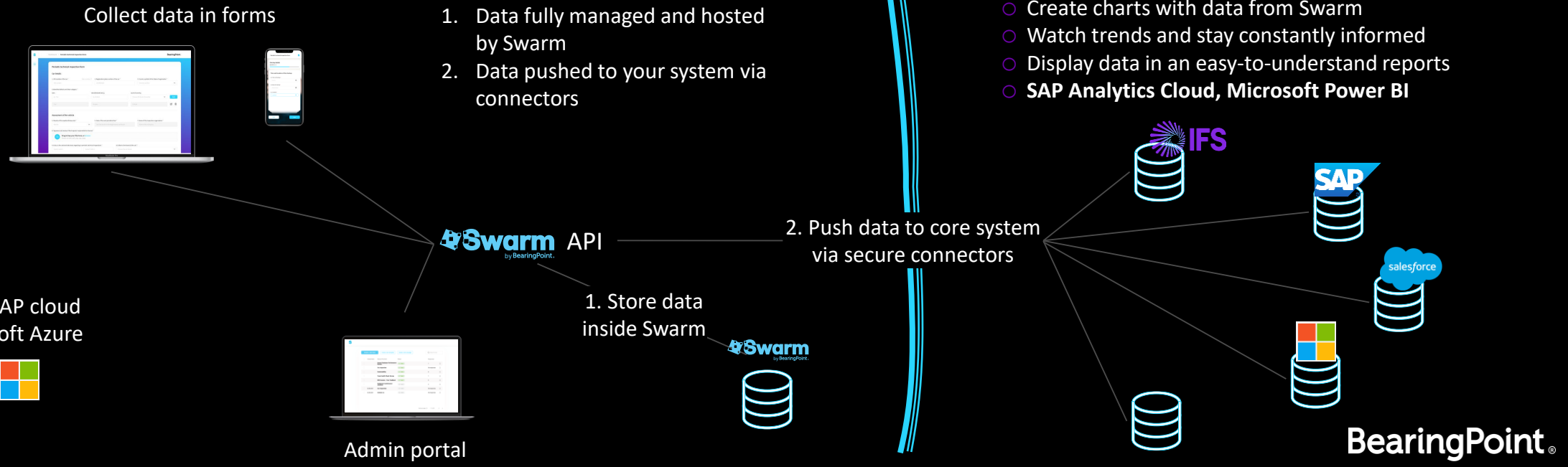
Your enterprise systems

For data **storage** purposes:

- Get only the relevant data form the form
- Data from same form can be pushed to different systems if needed
- **SAP** (Hana, S/4 Hana), **Microsoft** (Azure, SharePoint, Dataverse, Dynamic CRM)**, Salesforce, IFS, RIB**

For deriving **business intelligence**:

- Create charts with data from Swarm
- Watch trends and stay constantly informed
- Display data in an easy-to-understand reports
- **SAP Analytics Cloud, Microsoft Power BI**



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Plan, collect, analyse relevant data with Swarm

Initiate and manage the process

Ad-hoc execution, initiated by QR code scanning, from dashboard or by email

Schedule recurring campaigns, based on inspection due dates, including reminders

Predefined form templates for your business processes

Plan workflows, including external inspectors, approvers and technicians

Data collection and validation

Flexible and interconnectable input types: *text, date, time, checkbox, percentage, multiple choice, photo with red-markup, etc*

Location accuracy input types*: geolocation, indoor location, 2D & 3D models with pins*

Forms can be individualised and prefilled

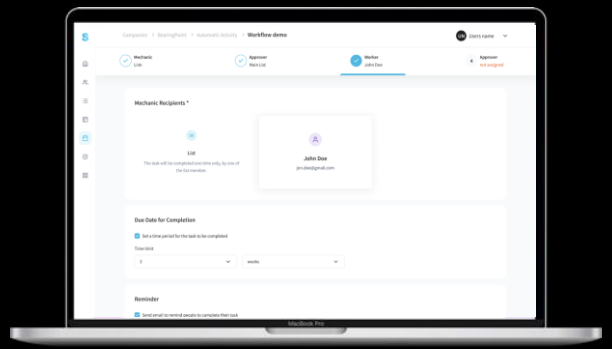
Reporting, analytics and further usage

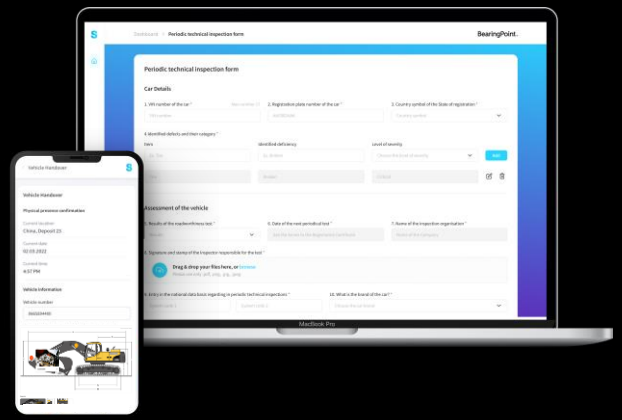
View, share and export data in Excel, csv or PDF

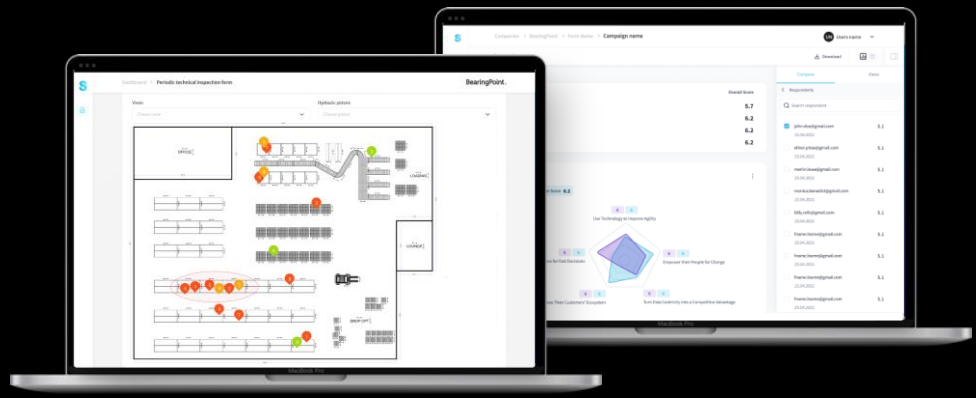
Built-in analytics for deriving upfront insights based on gathered information

Exposing structured data for major enterprise systems: *SAP, Salesforce, Microsoft, IFS, RIB*

Providing dynamic data to major analytics platforms: *SAP Analytics Cloud* or *Microsoft Power BI*







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Why Swarm compared to other solutions?

Our connectivity, flexibility and advanced input types sets us apart

Usual forms | **Swarm** | **Forms from ERP or other existing systems**

Survey Monkey / Typeform

Easy to create and share forms for various purposes focused on communication and branding.

How Swarm differentiate:

- Advanced input types using images and GPS location
- Assessments computing weighted scores and classifying responses in levels offering instant results
- Send multiple reminders and notifications after submit
- Advanced logic for conditional questions/ sections
- Benchmarking and comparing responses

BearingPoint Swarm

Flexible smart forms, easy to create and share, with use-cases covering communication, technical inspections and financial services.

Where Swarm thrives:

- Sending data from externals and contractors to ERP systems in a structured format
- Acting as a flexible data source for existing reporting and analytics models
- Prefilling forms with static data or data from other online sources like Salesforce, SAP, Microsoft
- Components using pins, GPS location and red mark-up images

Qualtrics / iAuditor

Complex processes using forms and data management for equipment, tool and fleet management focused on tasks and collaborative working.

How Swarm differentiate:

- Advanced input types for placing pins, using GPS location and red mark-up images
- Forms available on phone or desktop without additional apps installed and no login
- Sending data to multiple systems according to customizable rules
- Applicable to more use cases, can be used in multiple industries not limited to technical focus

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Take advantage of Swarm intelligence and manage all your business dimensions and use cases

Marketing

- NPS Surveys
- Product Research Surveys
- CSAT Surveys
- Content Evaluation Surveys
- Market Research Surveys
- Brand Awareness Surveys
- Customer Churn Reason Surveys
- Product Research Surveys
- Website Feedback Surveys

People

- HR employee surveys
- Employee information
- Performance reviews
- Contractor assessments
- Pulse surveys
- Feedback forms and satisfaction surveys
- Enrollment forms
- Employee master data updates
- Competency and skill assessments
- Referral forms
- Approvals Automation

Compliance

- Audit checks
- Security checks
- Supplier questionnaires
- Methodology assessments
- Risk management
- Regulatory checks
- Supplier qualification
- Approval workflows

Projects

- Project results
- Project health checks
- Maturity assessments
- Sustainability assessments
- Market surveys
- States of projects

Operations (sales, service, maintenance …)

- Damage reports
- Purchase requestion questionnaires
- CRM opportunity qualification
- Service inspections
- Customer complaints
- Order forms
- Quality checks
- Maintenance inspections
- Preventive checks
- Approval workflows

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Swarm usage in different industries

Take advantage of Swarm, no matter the industry that you work in

Project Management

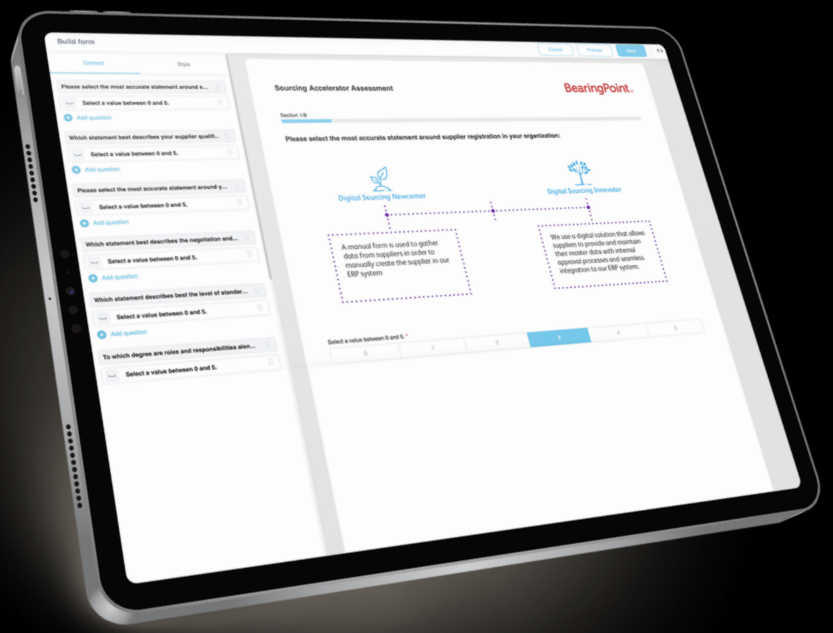
- Customisable forms for Timesheets, Spreadsheets;
- A solution which is accessible by all stakeholders (externals, contractors and others)
- Conditional relations between questions for efficient forms
- Recurring campaigns to collect updates automatically
- Automated reminders for non-submitted participants
- Access to data insights through Swarm Analytics and the systems through seamless integration

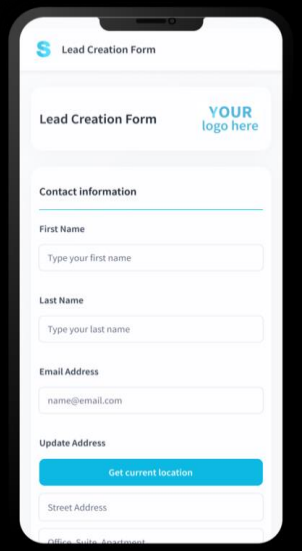
Sales

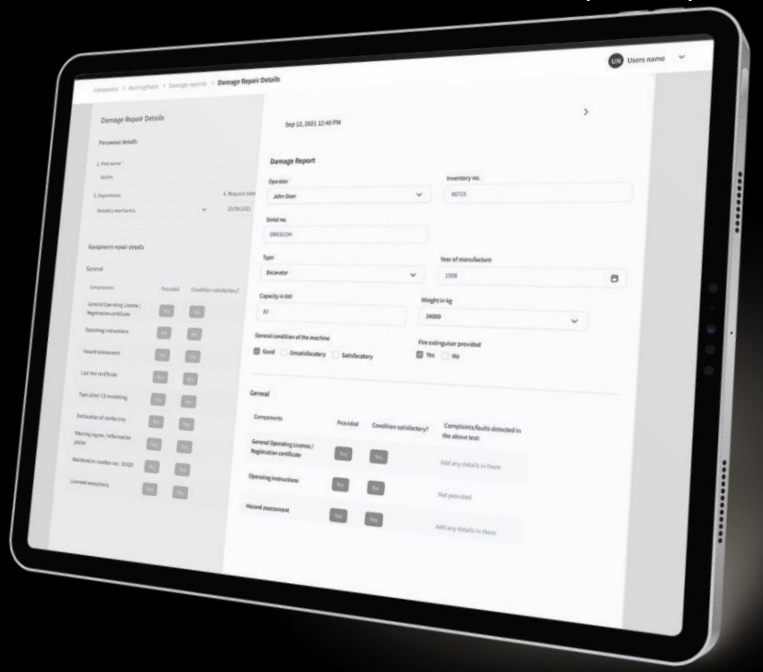
- Contact and Data management with the help of a simple lead creation form to document opportunities by employees working at customer's site
- Collect or update business partner and contact information
- Increase customer feedback, surveys, complaints or requests with a simple form
- Digital Signature workflow to easily onboard customers or partners

Construction/ Infrastructure/ Manufacturing

- Easy and accurate Inspections
- Automatically generated reports in Enterprise Systems
- Customisable Inspections with intuitive Interfaces
- Define Next Actions in case of discovered Issues
- Damage reports
- Damages documentation
- Fault reporting
- Damage repairing instructions
- Geolocation compatibility







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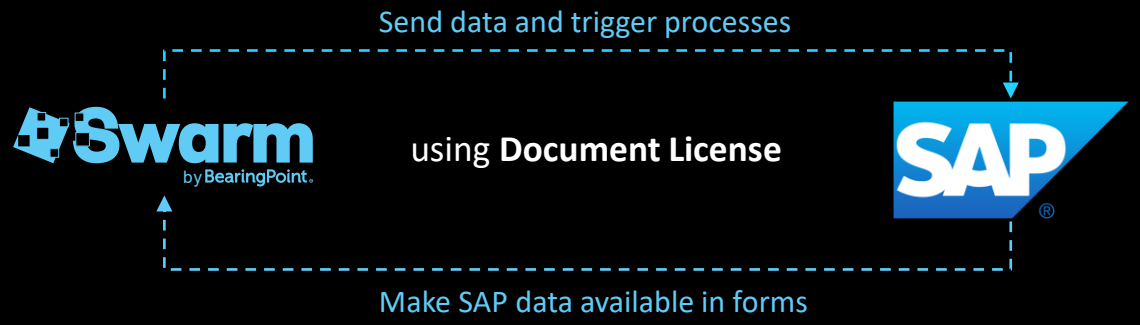
Swarm connected to ERP systems



Indirect/Digital Access is when people or things use the Digital Core without directly logging into the system. It occurs when humans, any device or system, indirectly use the Digital Core via non-SAP intermediary software, such as a non-SAP frontend, a custom-solution, or **any other third-party application.**

Use of the Digital Core through Indirect/Digital Access will be licensed based on these nine document types; **there is no additional charge for other document types.**

- Sales (counted at line item level)
- Invoice (counted at line item level)
- Purchase (counted at line item level)
- Service & Maintenance
- Manufacturing
- Quality management
- Time management
- Material (counted at line item level)
- Financial (counted at line item level)

Source: SAP website

ETM.next doesn't require special licensing for this type of access.

Swarm can extract and send data to ETM.next using a safe connection between the BearingPoint Products.

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Swarm forms feature summary

Take advantage of our flexibility and wide variety of inputs

Form types and settings

- Simple forms – 2 levels (sections and questions)
- Complex forms – 3 levels (sections, subsections and questions)
- **Workflows** – forms with multiple roles and permissions for approval or collaborative work

Form connectivity

Established connections:
- SAP (on premise and Cloud systems)
- SAP Analytics Cloud
- Salesforce
- IFS
- Microsoft PowerBI

Ways to integrate with external systems:
- Prefill data in forms for respondents to validate
- Check data from form against external systems (dynamic validations)
- Send data from form securely into external systems

Wide variety of input types

- Inputs with smart validations
  - Number
  - Unit measure
  - Currency
  - Email
- Inputs with pins
  - Pins on images (blueprints, sketches)
  - Pins on maps
- GPS Localisation inputs
  - Address
  - Proximity validator
- Evaluation inputs with acceptance intervals
  - Rating
  - Scale
  - Slider
  - Order by preference
- Complex inputs
  - Table with date, time, dropdown, switch, text and number column types
- Short text & Long text
  - Characters limit and mask
- Single and multiple choice & dropdowns
- Date & Time inputs

Form accessibility

Devices: phone, tablet, laptop

Security:
- Forms requiring authentication (SSO or credentials)
- Forms available via email without account
- Forms available for all (via link or QR code)

Sharing:
- Ad-hoc forms – activate immediately
- Scheduled forms – activate on specific date & time
- Recurring forms – activate on specific date & time based on customizable logic

Maximize responses:
- Customizable reminders
- Prefill form with personalized information (via excel or other systems – see more in Connectivity)

Form reporting

- Analytics module with charts for each question
- Individual responses view
- Exports of selected data in Excel and CSV format
- Customizable reports with filters on responses

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Swarm forms feature summary for BE Gear

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