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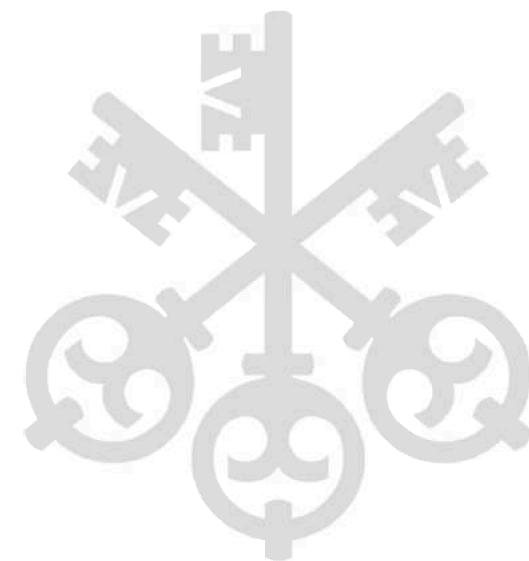
Internal

Sustainable Investments Platform

Innovation proposal

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Asset Management

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Growing Demand For ESG Investments Requires Advanced Solutions

UBS Asset Management's Harford says she's changed her mind on ESG investing

// We now have data and technology that facilitates a really robust change to the investment process

Suni Harford
CNBC

Defective data is a big problem for sustainable investing

// More companies need to go from words to numbers. Markets will be better informed if relevant, sustainable measures become part of the fabric of corporate reporting, alongside their financial statements

Huw Van Steenis
Financial Times

UBS Asset Management Looks to Unstructured Data to Aid ESG Analysis

// ESG is meanwhile in almost everywhere that we do [...] But this unstructured data is coming in more and more, in all aspects

Thomas Heinzl
Fund Fire

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Sustainable Investments – Key Needs



Strategic Trends

- Growing ESG products demands
- Popular “greenwashing” concerns
- Customization and personalization of investment solutions
- Data-driven unique customer experience
- Data Products and data monetization
- Wave of ESG regulations and standards



UBS Concerns

- SI market competitiveness
- Global brand and reputation in sustainable investments
- Digital operations and zero-cost scalability
- Time-efficient decisions
- ESG regulatory reporting
- Platform distribution
- Sustainability
- Digital business



Know Issues

- Defective, fragmented and unreliable data for sustainable investments
- Supply chain problem – how to collect ESG information across all supply chains
- Unstructured Data – most ESG data is in unstructured formats
- Data availability for private investments - Private Equities, Portfolio Companies

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Clients Expectations



Materiality matters

Sophisticated investor will require more advanced use of climate risk assessment tools to deliver upon the de-carbonization efforts:

- Embed sustainable factors into risk management and identify early signs of the scandal
- Identify where environmental pollution or climate change can materially influence financial assets - including both direct and indirect impacts
- Provide roadmap of de-carbonization efforts for portfolio outcomes at the individual holding level

Draft Challenges/Solution Tenets

Challenges

Defective, fragmented and unreliable data

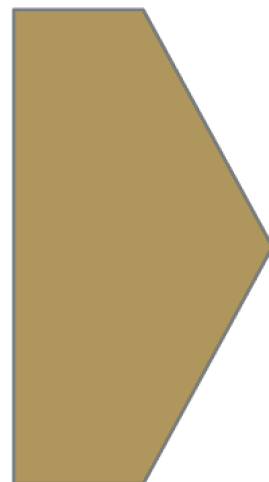
Supply chain puzzle

Unstructured Data

Data availability for private investments

Customization and personalization of investment solutions

Data stream integration



Solution Tenets

Economically-driven third-party data marketplace

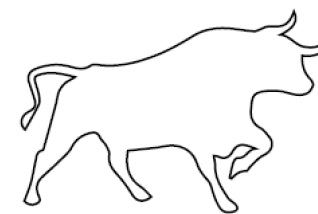
ESG ecosystem with a net of agents, partners and row data providers

Dimensional layered structure of ESG Disclosure adopted to probabilistic modelling

State-of-art tools and streamlined processes for corporate ESG self-assessment

Comprehensive ESG data model adopted to sustainable investment modelling

Extreme self-service data integration



Ambition. “Industry Marketplace of Sustainable Investments” - leading ESG investment platform established as industry standard

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How This May Work – Key Elements

Ecosystem

- ESG agencies with expertise at specific industries
- Data providers of environmental performance at key sectors and domains
- Marketplace for third-party ESG model developers
- Distribution platforms of banking products
- Links with exchanges for structured Green products

Process

- Structured ESG Disclosure
- Easy, simple ESG Assessment Process
- Real-time attribution of ESG effects to financial instruments
- Digital product distribution via multiple channels



Platform

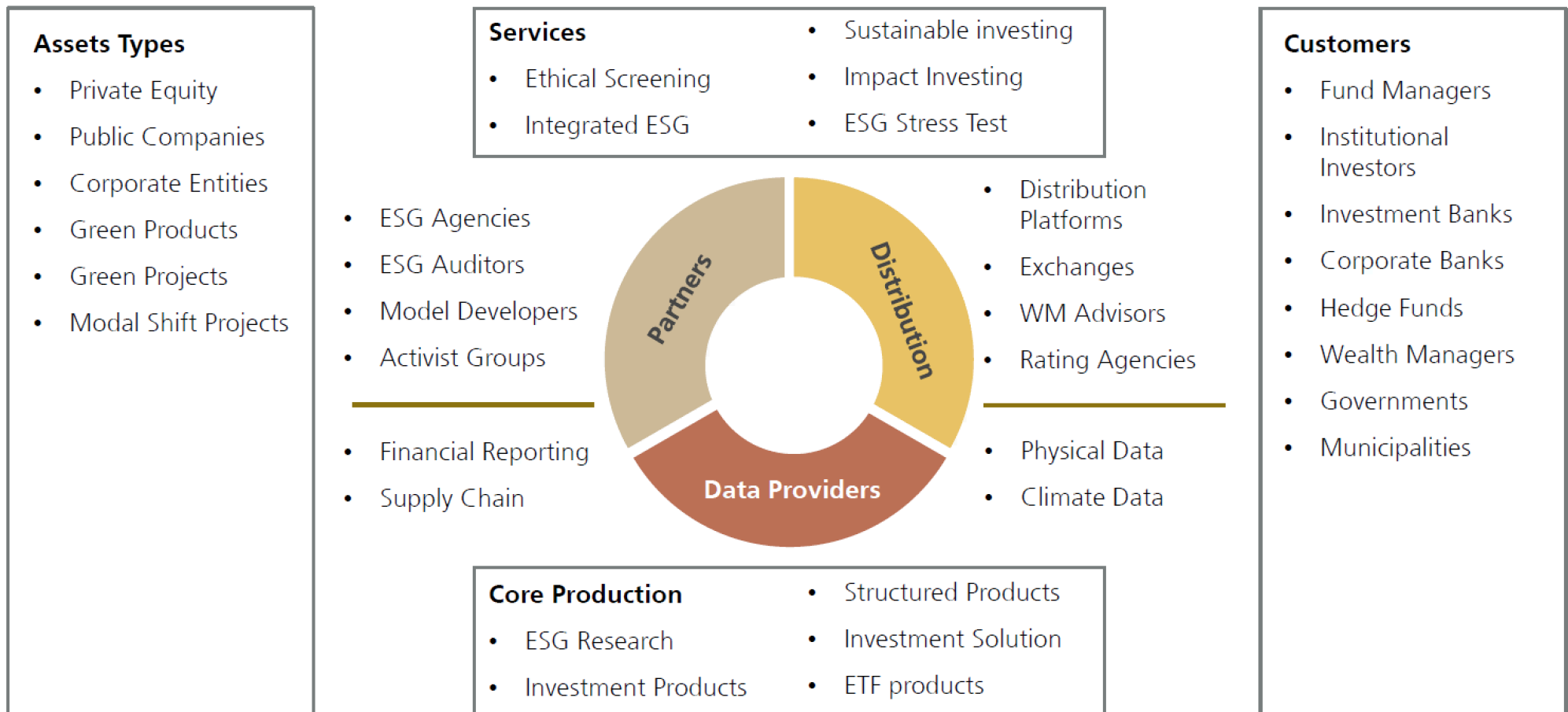
- Custom portfolio management tools designed for ESG investment process
- State-of-art ESG assessment tools for ESG agencies
- Plug-in data streaming from industry data providers
- Direct integration with distribution platforms and key partners
- Open API products for institutional investors and rating agencies
- Mobile tools for Wealth Management advisors

Technology

- Comprehensive Data Model
- Reuse investments into AM Data Platform, Evidence Lab and IB Aqua platform
- Scalable data collection of both structured and unstructured ESG data
- Functional integration with internal portfolio management systems

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Holistic Approach To The Platform Ecosystem



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Comprehensive Platform Data Model

Enterprise ESG datasets

- Environment assessment
- Social impact assessment
- DNSH assessment
- Supply chain assessment
- Project / Operations assessment

Industry ESG datasets

- Supply chain
- Distribution chain
- Geospatial data
- Government industry data
- Industry body data

Alternative datasets

- Social communications
- Regional physical environment (temperature / wind / water / solid mass)
- Global climate data

Government datasets

- Government environment projections
- ESG Stress test results
- Government ESG policies / targets

ESG Agency

- ESG assessment validation
- ESG audit
- ESG rating

ESG Models

- Qualitative models
- Static quantitative models
- Dynamic quantitative models
- Model forecasts

Investment funds

- Fund composition (over time)
- Fund ESG policy (over time)

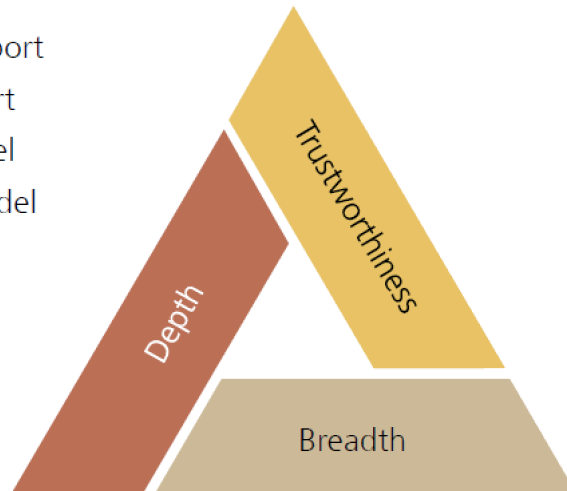
Project / Private Equity

- Activity scope
- Project scale
- ESG impact
- Project ESG timeline
- CAPEX / OPEX ESG exposure

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More Than Data – Apply Dimensional Layered Structure Into ESG Disclosure

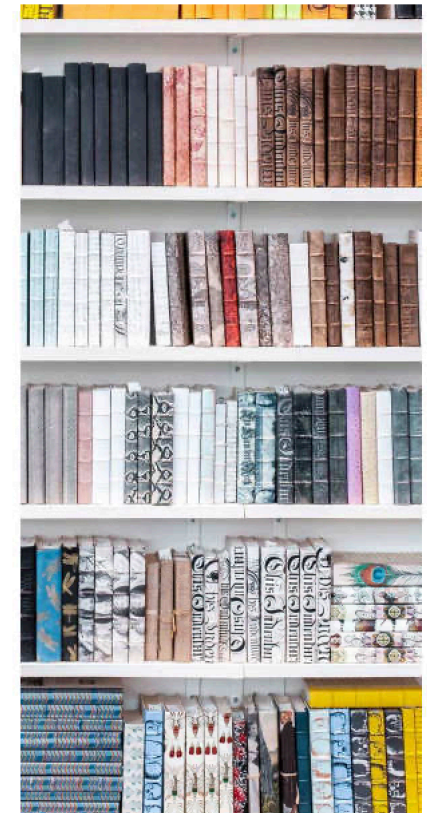
- Unstructured report
- Structured Report
- Qualitative Model
- Quantitative Model
- Forecast Model



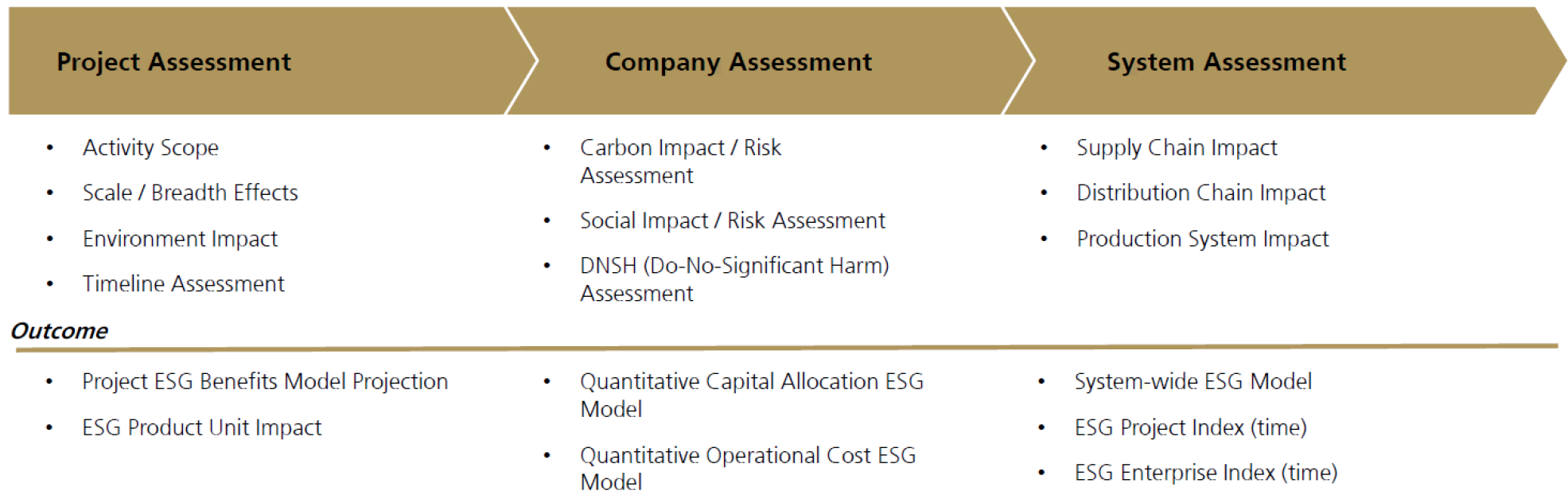
- Self-assessment
- ESG Validated (consistency checks)
- ESG Audited (facts checks)
- Model-based validation (alignment with industry models)
- Alternative Data-based validation (alignment with third-party data)

- Project-wide
- Enterprise-wide
- System / supply chain-wide

This approach allows to account availability and reliability of ESG datasets and transform “mediocre” data into excellence using probabilistic Bayesian methods.



Draft Scale Up ESG Assessment Process

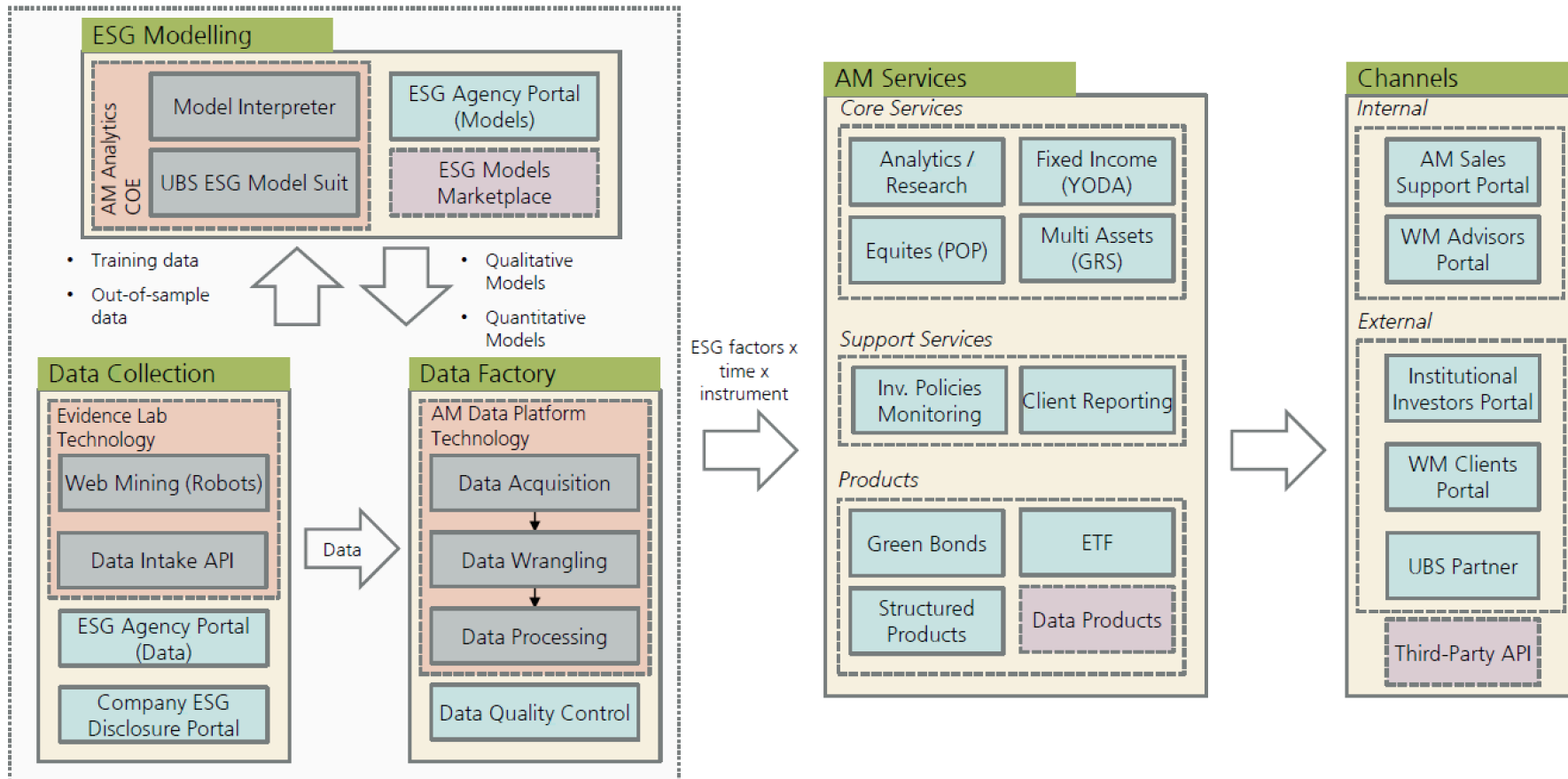


- Semi- or fully automated assessment process relying on the structured disclosure provided by the company, alternative sets of data and set of ready to use ESG assessment models will instantly generate projected ESG impact in scale.
- Pre-created quantitative assessment models for key industries and sectors will become efficient tool to create a reliable ESG strategy for relevant investors.
- ESG Index function is a quantitative description of project ESG benefits in form of numerical points in time and must keep specific mathematical properties.

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End-To-End Digital Operations And Distribution

Integration of AM Data Platform with Evidence Lab technologies allows to build end-to-end Digital Operations and Distribution.



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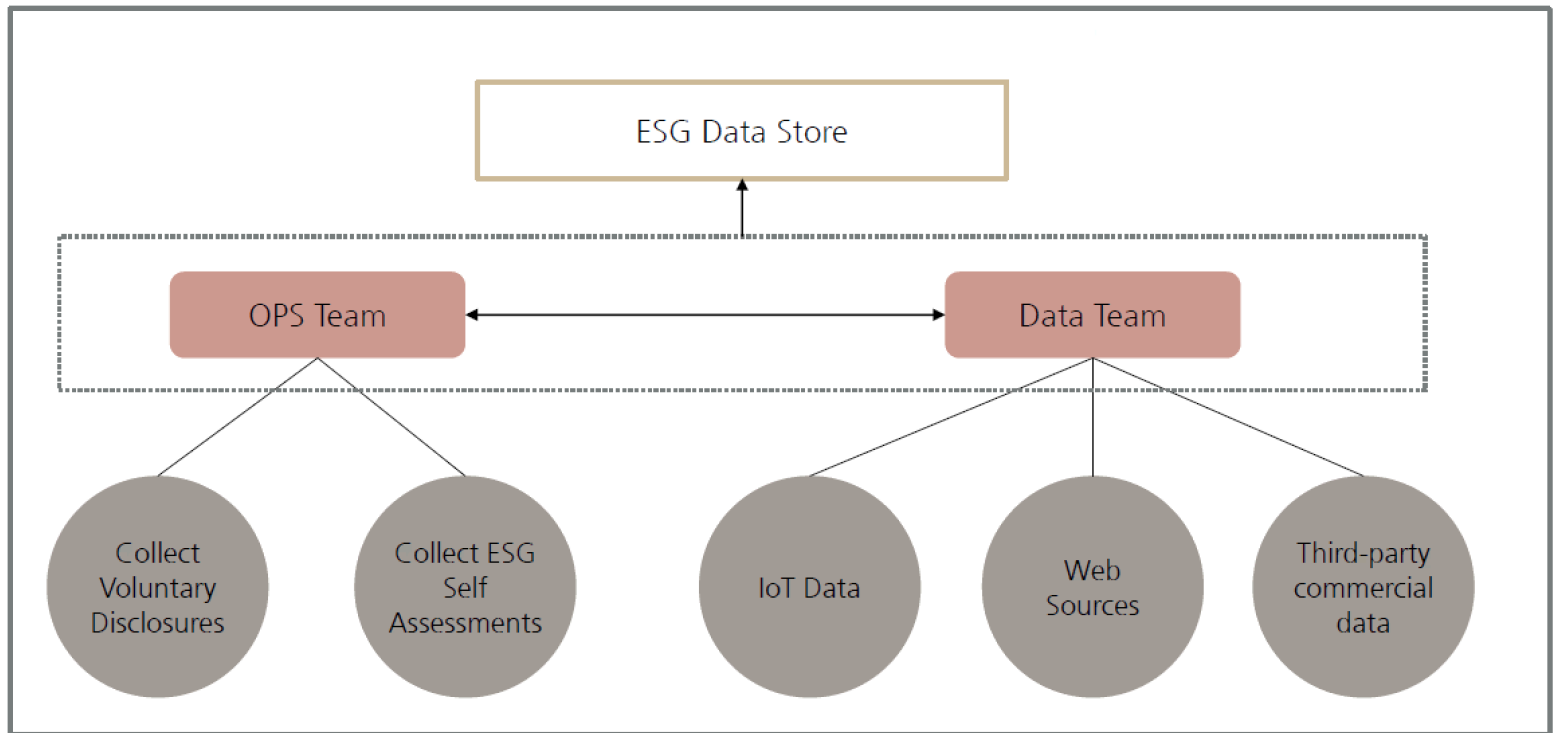
Big Problem – Data Collections Operations

- Promoters
- Engagement with institutional investors
 - Engagement with Funds

- Analysts
- Modelled projections
 - Structured indicators
 - ESG ratings

- Engagement Agents
- Disclosure engagements
 - Support projects / enterprises
 - Relationship support

- Governance Team
- Economic Stimulus
 - Process Control
 - Data Standards



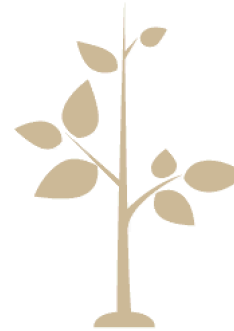
Draft Roadmap



Set-up data feed for basic ESG data collection on top of existing investments



Build state-of the art tools for ESG agencies and set-up partnerships with the focus on new industries



Integrate advanced internal models with externally developed ESG models



End-to-end automated lean ESG assessment process for key sectors

Draft Solution Benefits



From UBS perspective this will give **unique market advantage** at sustainable investment market and potentially **minimize reputational risks** associated with "greenwashing"

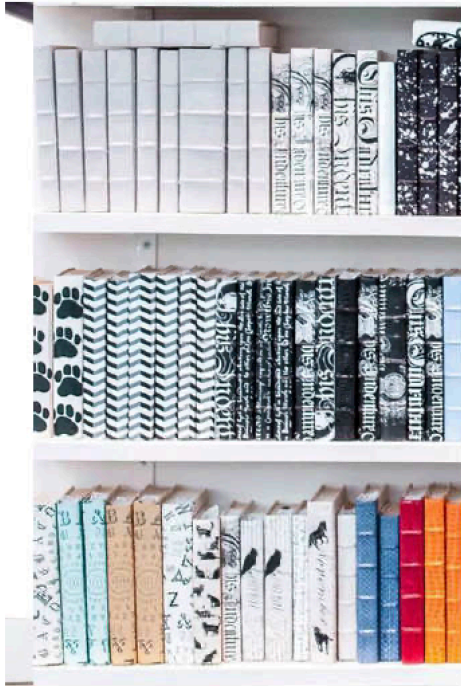
Solution will help financial advisors to **improve sales of sustainable financial products** and **enhance engagement with clients**, produce detailed "green" and "sustainable" composition for each type of individual or mass-market investment product

Ultimately the system going to be central source of information for **efficient decision making** on sustainable investment solutions

In addition to that there is a possibility to **generate revenues via commercialization of sustainable data products** in cooperation with partners (i.e. providing restricted access to data via partner channels, commercial access to datastore to smaller asset managers, etc.)

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Central Source Of Information



- Support internal decision makers in UBS regarding sustainable solutions
- Provide reliable information to regulators regarding sustainability in investment information and decision making
- Source of research and analysis in sustainable investments
- Potential to identify investment risks and potential returns in sustainable investment area
- Driving source of information for investment decisions with sustainable mandate
- Possibility to efficiently implement sustainable solution with strategies including “avoidance” strategies (elimination of certain companies and sectors) and “advance strategies” (increasing exposure to specific sectors)
- Impact reporting on social and environmental issues delivered to internal decision makers and external clients (in combination with financial return and risk)