DEUTSCHE BÖRSE GROUP

DBG Data Governance

Project introduction

November 2017

Context and objectives for Data Governance project

Context

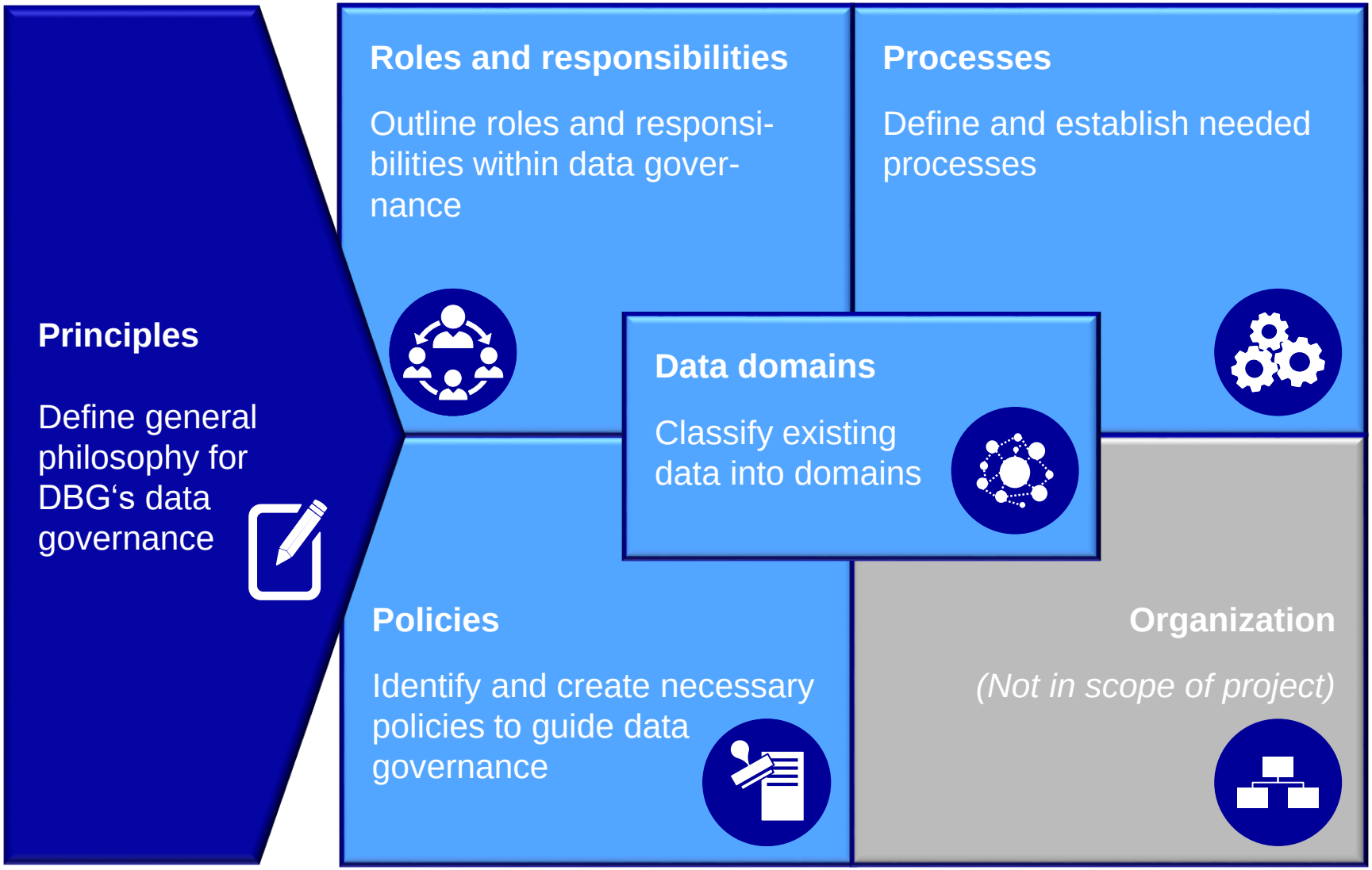
- **Importance of data has grown** in recent years and is of particular importance for DBG – both from a value maximization[1] and from a risk management perspective
- However, DBG faces **some data-related challenges,** e.g.,
  - Missing transparency on available data which is an important basis for development of new/ innovative products and services
  - No standardized processes to facilitate data usage across the group
  - Increasing regulatory demands
- Challenges like these can be addressed by a **state-of-the-art data governance,** which consequently has been adopted by a majority of leading institutions in financial services

Project objectives

- **Create top-down transparency** on DBG's main data assets, procedures, and policies (including identification of major pain points)
- **Identify best practices** and evaluate their applicability for DBG
- **Design a high-level blueprint for DBGs new data governance** (focusing on governance concept and not the organizational set-up)
- **Develop high-level implementation roadmap**

1 Recent examples include the development of new data services as well as the usage of data for new product developments (e.g., TRUMID) or in partnerships and products (e.g., in the index space)

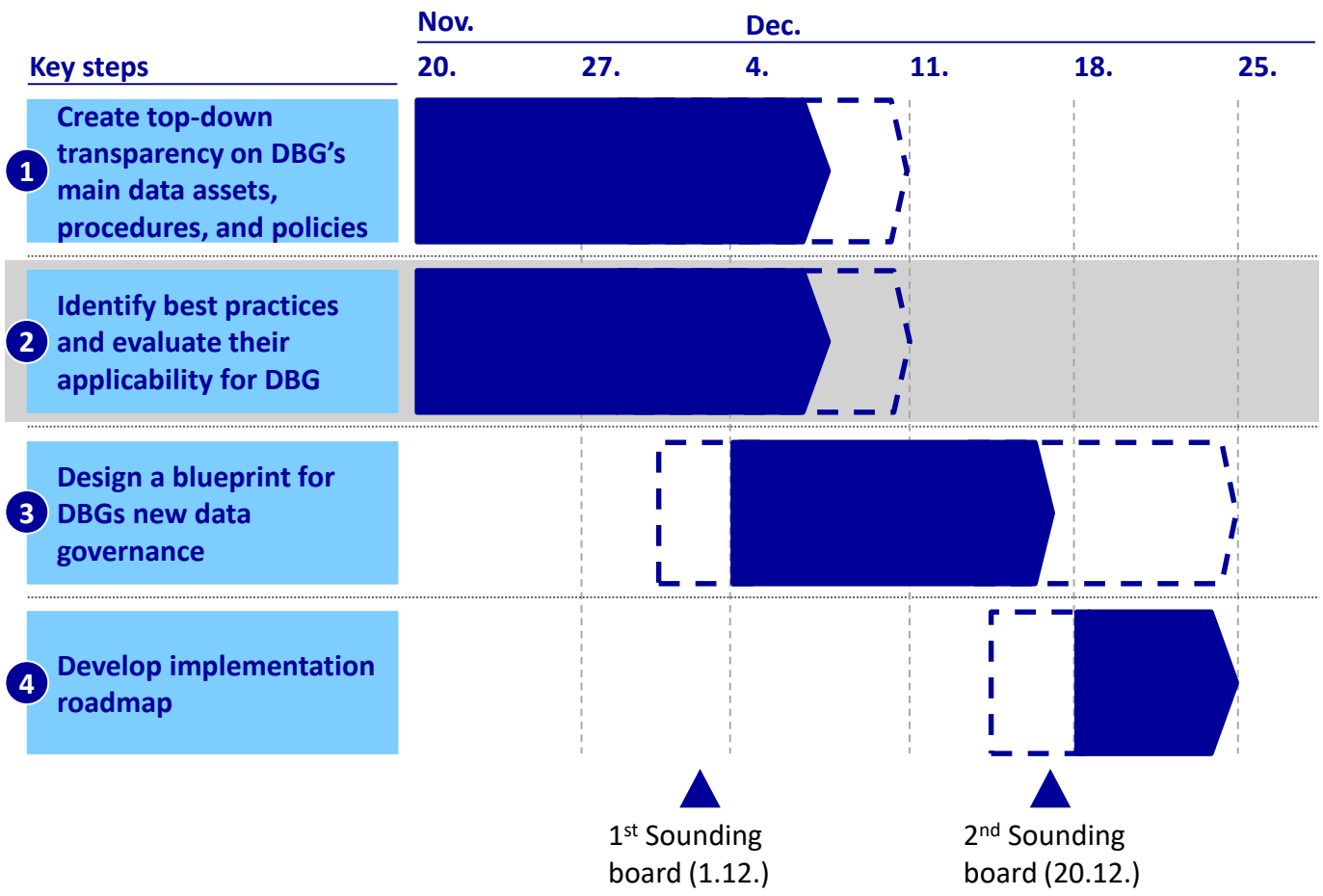
Best-practice data governance consists of 6 key design elements



Project will run for 5 weeks and have a Sounding Board with members across DBG main businesses and functions

Detailed on next page

Planned project approach



Proposed Sounding Board members

- Holger Wohlenberg (lead)
- Thomas Book
- Oliver Engels
- Frank Fischer
- James Freis
- Alexandra Hachmeister
- Jens Hachmeister
- Oliver Hedtmann
- Christoph Kraus
- Michael Krogmann
- Thomas Laux
- Sascha Rangoonwala
- Stephan Reinartz
- Marc Robert-Nicoud
- Uwe Schweickert
- Marco Steeg

2 At the beginning of the project we will leverage interviews with CDOs of leading organizations to identify best practices

Detailed on next pages

- **Interviews with Chief Data Officers (CDOs)** of relevant (financial and non-financial) companies
- **Key topics** for discussion include e.g.,
  - **Overall design principles** (e.g., central vs. decentral set-up, risk minimization vs. value maximization)
  - **Key elements** of data governance set-up
  - **Best practice learnings**
  - **Collaboration between business, tech, and risk**

Interviews already conducted:

- ✓ BNP PARIBAS
- ✓ Bank of America
- ✓ AXA
- ✓ BNY MELLON
- ✓ Munich RE
- ✓ FEDERAL RESERVE BANK of NEW YORK

Further interviews planned (examples):

Google, amazon, DELL, IBM, GROUPON, DOW JONES

Example BNP Paribas – Clear data governance established with focus on cross-divisional collaboration

BNP PARIBAS

NOT EXHAUSTIVE

Design elements	Description
Principles	▪ Introduction of data governance with objective to enable access to data across business lines and streamline implementation of use cases ▪ Public data catalog available to all users in the company
Data domains	▪ Data is grouped into broad categories (e.g., accounting, customer data) and distinct data domains are defined
Roles and responsibilities	▪ Clear set-up of data governance organization (i.e., CIB CDO organization with sub-CDO functions by business line and lean teams distributed geographically) ▪ Clear data ownership in place: Data remains in ownership of respective business units resulting in ownership matrix of business lines and asset classes ▪ Data standards and metrics defined by CDO organization (centrally) and implemented by respective local data owners and IT
Processes and data policies	▪ Data access managed based on user profile and domain while disputes are arbitrated by data owners (if needed escalation to data owner committee) ▪ Data quality monitoring has largely been automated

Example Bank of America – Clear data governance allocating data domains to business units

Bank of America

NOT EXHAUSTIVE

Design elements	Description
Principles	▪ Data governance serves three key purposes: Transparency, documentation, and control ▪ Meta-data is publicly available for each domain across the company
Data domains	▪ All data categorized into domains (~50-60, e.g., wholesale credit, traded products) and allocated to one business unit (e.g., retail, wholesale) which acts as data steward ▪ Each domain defines authorized data sources (federated golden source approach[1])
Roles and responsibilities	▪ Broad CDO function including teams for policies/standards and data science with responsibility for e.g., centralized data platforms, governance tools, allocation of funding for data-related initiatives ▪ Data stewards placed locally in businesses taking directions from the CDO and accountable for implementation of data governance standards
Processes and data policies	▪ Data quality standards are centrally defined and monitored ▪ Purchasing and access control are centralized within the business units but not across the group

Implementation started with transparency phase (data classification and assignment to domains, then data stewards); physical data integration is planned as next step

1 Local data pools which can be combined if needed