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Bachelor's Thesis

Analysis of Exchange Processes and Strategic Opportunities in the SAP Business Data Cloud Partner Network: A Business Perspective on Zero-Copy Integration as a Market Trend

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Business Informatics

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Bachelor's Thesis
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Abstract

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List of Abbreviations

AI	Artificial Intelligence
API	Application Programming Interface
AWS	Amazon Web Services
BDC	Business Data Cloud
BTP	Business Technology Platform
CAPEX	Capital Expenditure
CDC	Change Data Capture
ERP	Enterprise Resource Planning
EaaS	Everything-as-a-Service
ETL	Extract, Transform, Load
EY	Ernst&Young
HCM	Human Capital Management
IT	Information Technology
OPEX	Operational Expenditures
RBV	Resource-Based View
R&D	Research and Development
SaaS	Software-as-a-Service
TCE	Transaction Cost Economics

Todo list

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- Quelle? 3
- Azure? 15
- typo in picture (see qualitative) 28
- GGf. Anpassen 32

1 Introduction

In today's digital economy, data is the foundation for informed decision-making and innovation. Organizations face the challenge of integrating, managing, and transforming large volumes of heterogeneous data into actionable insights. The SAP Business Data Cloud (BDC) is designed to meet these demands by providing a unified, fully managed data platform that seamlessly integrates SAP and third-party data.

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2 Theoretical Background

2.1 Technological Foundations of SAP Business Data Cloud

2.1.1 SAP Business Data Cloud

To understand SAP Business Data Cloud (BDC) and its role in SAP's data strategy, it is first essential to examine the Intelligent Enterprise concept.

SAP SE (2022b) defines the Intelligent Enterprise as *"an event-driven, real-time business powered by intelligent applications and platforms."* At its core, this strategy leverages enterprise data—combining internal systems of record with real-time external data feeds—to train intelligent algorithms and embed automation into core business processes (SAP SE, 2022b). An intelligent enterprise aims to improve decision-making through advanced analytics and enable its organizations to rapidly transform data into actionable insights, driving process automation, innovation, and optimal user experiences.

Introduced as part of SAP's broader strategic vision, *"The Experience Company powered by the Intelligent Enterprise"* emphasizes the importance of data-driven operations and customer-centric innovation. By integrating technologies such as SAP Business Technology Platform (BTP) and BDC, organizations can dynamically adapt to market changes and enhance business outcomes through real-time, data-driven decision-making (Seubert, 2022, p. 21, pp. 31–32).

Modern enterprises operate in a highly dynamic and data-driven environment, necessitating continuous adaptation and optimization of their IT infrastructures. Businesses need scalable, flexible, and integrative solutions to adopt new functionalities and address these challenges seamlessly (Statista, 2024b; Statista, 2024a).

SAP’s BTP enables this transformation by providing a modular and extensible ecosystem for enterprise applications (Seubert, 2022, pp. 39–41).

BTP enables organizations to extend their business applications through low-code development environments, advanced analytics, Artificial Intelligence (AI)-driven automation, and robust data integration capabilities (Seubert, 2022, pp. 53–66). This ensures enterprises can dynamically respond to evolving market conditions and business requirements without significant structural changes to their IT landscape .

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Quelle?

While BTP serves as a modular platform providing the technological foundation, BDC functions as the central data solution that enables the efficient use of this platform through unified data management.

SAP BDC is a Software-as-a-Service (SaaS) solution designed to unify, manage, and govern SAP data across various applications while also enabling seamless integration with external data sources. SaaS refers to the on-demand provision of applications based on the Everything-as-a-Service (EaaS) concept. Information Technology (IT) resources are made available flexibly over the internet, eliminating the need for users to purchase or operate the software themselves. Costs are primarily incurred based on usage (Operational Expenditures (OPEX)), while capital expenditures (Capital Expenditure (CAPEX)) are typically avoided. BDC ’s function is to provide a harmonized data foundation that allows enterprises to generate real-time, AI-powered insights across different business domains (SAP SE, 2025b).

With the growing reliance on data-driven strategies, organizations increasingly face challenges related to fragmented data landscapes, isolated analytics, and slow decision-making processes (Bitkom e.V., 2023). SAP BDC addresses these issues by offering an integrated data platform that fosters enterprise-wide data exchange and analytics, reducing operational complexity and eliminating redundancies (Bitkom e.V., 2023, pp. 4–6). Figure 2.1 illustrates the role of SAP BDC within the broader SAP BTP ecosystem.

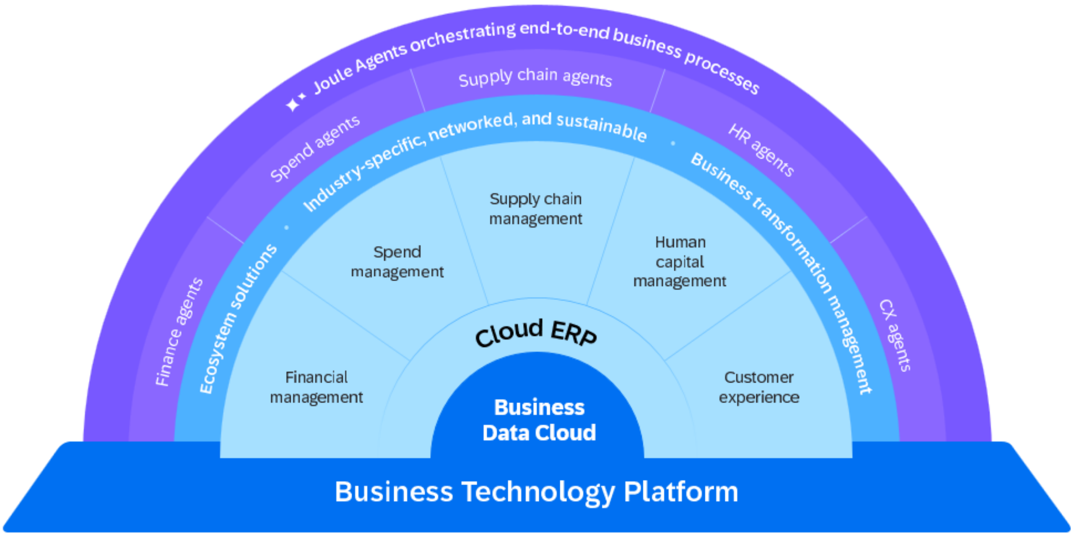

Figure 2.1: SAP Business Data Cloud within the Business Technology Platform Ecosystem. Reprinted from SAP SE (2025b)

SAP BDC functions as a central data orchestration layer, linking Cloud Enterprise Resource Planning (ERP), ecosystem solutions, and AI-driven agents. Its primary innovation lies in providing structured data products, which enable controlled and efficient access to SAP data from critical business processes (SAP SE, 2025c, pp. 14–18). Unlike traditional data management approaches that rely on extensive data extraction and replication, SAP BDC utilizes a zero-copy data integration framework, significantly reducing data duplication and enhancing real-time data accessibility (SAP SE, 2025b & SAP SE, 2025c).

Feature	**SAP BTP (Business Technology Platform)**	**SAP BDC (Business Data Cloud)**
Primary Purpose	Provides an integrated platform for application development, data management, and AI/analytics[1]	Centralized data management and governance across SAP applications and external sources[2]
Core Functionality	Development environment, integration services, analytics, AI/ML capabilities[1]	Unified data layer, real-time data access, structured data products[2]
Key Differentiator	Flexibility for extending SAP applications with custom developments[1]	Structured data products for enterprise-wide data sharing and analytics[2]

Table 2.1: Comparison of SAP BTP and SAP BDC

To better understand the distinct roles of BTP and BDC within SAP's ecosystem, Table 2.1 provides a comparative overview. While SAP BTP serves as a comprehensive platform for application development, integration, and analytics, SAP BDC focuses on centralized data management and real-time access to structured business data.

2.1.2 Data Replication

Zero-Copy Integration is an advanced data-sharing approach that eliminates the need for traditional data replication and movement. Instead of physically copying data between systems, zero-copy integration enables direct access to data at its source while ensuring real-time consistency and governance (Kihn, 2024).

Data replication and movement refer to copying or transferring data between systems to ensure availability in multiple locations. In the past, approaches following the Extract, Transform, Load (ETL) framework have been widely used for data integration, consistency, and accessibility (Simitsis et al., 2005, p. 1).

ETL is a method for consolidating data from multiple sources, transforming it into a unified format, and loading it into a target system (IBM, n.d.). However, ETL pipelines often introduce latency due to their batch processing nature, making real-time data synchronization difficult (Vassiliadis, 2009, pp. 18–20).

Figure 2.2 shows a visual representation of such a copy-based integration.

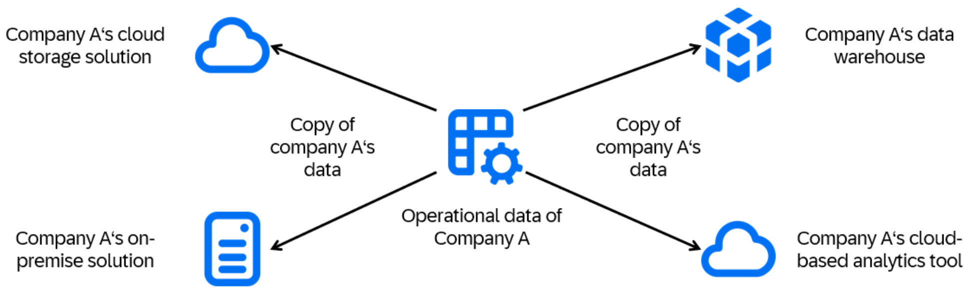

Figure 2.2: Copy-based integration Approach. Adapted from Hilleary (2021).

[1]Seubert (2022)
[2]SAP SE (2025c)

As illustrated, this leads to redundant copies of data, increasing governance complexity and storage costs, and is mainly used for reporting or archival purposes (Informatica, 2024).

More modern approaches include methods such as Change Data Capture (CDC). CDC captures and replicates only the modified data in real-time, reducing the overhead of full dataset replication and allowing near real-time synchronization (Informatica, 2024).

CDC captures changes by reading the transaction logs. Every transactional database has a log in which every change is stored sequentially to enable recovery. Log-based methods work by capturing data modification information from the transaction log of the data source and sending it to the target system (Imani et al., 2023, p. 266).

Running the ETL process based on log changes in the data source allows ETL to process only the latest data without re-reading the entire data source. This improves the efficiency of the ETL process and allows the target system to run more effectively, enabling near-real-time changes of data (Imani et al., 2023, p. 266).

A more recent paradigm in data architecture is zero-copy integration. Zero-copy avoids making physical copies of data and instead enables different systems or services to access data in place from a single source. In a zero-copy approach, data remains in its original repository and is shared or accessed on-demand without performing the traditional extract-transform-load cycle, thus making it possible to tap into data across several databases or platforms without moving or duplicating it (Kihn, 2024). In addition to reducing data movement overhead, this significantly improves data governance, performance, and cost efficiency (Hilleary, 2021).

Modern cloud platforms implement data sharing or zero-copy cloning, where an entire database or table can instantly be made available to other users or workloads without copying the underlying data. In this case, the clone references the original data storage, meaning that multiple consumers can query the same single stored dataset simultaneously, each seeing current data (Hilleary, 2021).

This eliminates the traditional data export in ETL, thereby strengthening concepts such as data ownership. Instead of relinquishing copies of the data, ownership is maintained by temporarily granting access. Through this zero-copy approach, continuous control over the data is preserved while allowing others to benefit from it (Hilleary, 2021).

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- latenz
- lasteffekte auf datenquelle

SAP BDC is designed to leverage these zero-copy integration principles, enabling enterprises to seamlessly access and share data across various SAP and non-SAP environments.

Instead of creating physical data copies, BDC offers virtualized access to business-critical data through the aforementioned data products to ensure that the dataset remains structured and reusable (SAP SE, 2025a). A data product is a data set exposed for consumption outside the boundaries of the producing application via Application Programming Interface (API)s and described by metadata (SAP SE, 2025c, p. 15).

To better understand the differences between traditional and modern data integration approaches, Table 2.2 provides a structured comparison of ETL, CDC, and Zero-Copy Integration.

SAP implements zero-copy integration through Delta Sharing (SAP SE, 2025c, p. 38), an open protocol developed by Databricks and the Linux Foundation for secure and efficient data sharing (Databricks, n.d.). Delta Sharing enables organizations to share large datasets in real-time without moving or copying the data, thus maintaining a single source of truth (“Delta-Io/Delta-Sharing”, 2021, April 8/2025). This improves performance, enhances data governance, and allows cross-platform compatibility (Khan, 2025).

Method	Description	Pros	Cons	Fields of Use
ETL (Extract, Transform, Load)	A traditional data integration process which involves extracting data from a source system, transforming it into a suitable format, and loading it into a destination system[3]	ETL simplifies data integration by consolidating multiple data sources into a single repository, ensures data quality through validation and deduplication.[3]	ETL processes can be resource-intensive and can incur high costs, introduce performance bottlenecks if not correctly tuned, be time-consuming due to extensive design and monitoring efforts, and depend heavily on source systems.[3]	ETL is used for data warehousing, business intelligence, and big data processing. It ensures that data is structured for analytics and reporting.[4]
CDC (Change Data Capture)	CDC continuously identifies and captures incremental changes to data and schemas in source systems, enabling low-latency replication for operational and analytics applications.[5]	CDC enables real-time analytics and decision-making by continuously capturing incremental data changes. By only sending changes, it reduces disruptions to production workloads and minimizes the cost of data transfer.[6]	CDC implementation can be complex and requires expertise to ensure consistency and fault tolerance. It may introduce overhead in tracking changes, and improper configuration can lead to latency or data inconsistency issues.[6]	CDC is widely used in real-time analytics, operational data replication, cloud migrations, and big data processing[6]
Zero-Copy Integration	Zero-copy integration refers to an integration concept in which data from different systems is used or merged without physically copying or moving it.[7]	Key benefits include savings in storage space and infrastructure costs due to the elimination of redundant data copies as well as reduced complexity in data pipelines.[8]	Zero-copy integration is only possible if all systems involved use compatible data formats and interfaces; otherwise, complex data conversions or duplicates are still necessary.[9]	Zero-copy integration is primarily used when data from multiple sources needs to be merged in real-time without redundant storage.[10]

Table 2.2: Comparison of ETL, CDC and Zero-Copy

2.2 Strategic Collaboration and Market Positioning

2.2.1 Concepts and Theoretical Foundations of Strategic Alliances

Strategic alliances—voluntary cooperative agreements between firms—have become critical for companies seeking competitive advantage, innovation, and market expansion. These alliances, defined as cooperative agreements among two or more organizations, enable firms to pool resources, share risks, and leverage complementary capabilities (Hagedoorn, 1993, pp. 372–374). Globalization, digital transformation, and complex industrial ecosystems have further intensified the importance of alliances in contemporary business strategy (He et al., 2024, p. 3).

Strategic alliances encompass a broad array of partnerships, ranging from joint ventures and franchising to licensing, business networks, public-private partnerships, supplier-buyer alliances, and many more (He et al., 2024, pp. 4). According to Vonortas and Zirulia (2015, pp. 1–2), alliances are particularly significant in knowledge-intensive industries, where firms rely on external partners to access technological advancements.

According to Hagedoorn (1993, pp. 374–375), alliances can be categorized as horizontal (alliances among competitors) and vertical (alliances between suppliers and buyers), further differentiating between equity-based and non-equity-based collaborations. In contrast, Kanter (1994) emphasizes the relational aspect, defining alliances as "living systems" that evolve and require continuous adaptation and trust management.

[3]Kimball and Caserta (2004, ch. 1)
[4]Kimball and Caserta (2004, ch. 7)
[5]Petrie et al. (2018, ch. *Introduction*)
[6]Petrie et al. (2018, ch. 1)
[7]Lajus and Mühleisen (2014, p. 1)
[8]Lajus and Mühleisen (2014, pp. 2–3)
[9]Lajus and Mühleisen (2014, pp. 2–4)
[10]SAP SE (2025c)

Auf die Seite mit der Tabelle bekommen

Scholars have developed multiple theoretical lenses to analyze the formation and success of strategic alliances. Each lens provides distinct insights into why firms engage in these partnerships and how they function. This chapter will examine some of these theories to explain why firms form alliances.

Transaction Cost Economics

Transaction Cost Economics (TCE) posits that firms organize transactions in order to minimize the sum of production and transaction costs (Kogut, 1988, p. 320; Salamat et al., 2018, pp. 486–487). Williamson (1979, pp. 234) argues that companies will internalize exchanges (vertical integration) when market transactions are inefficient or risky. In the context of alliances, TCE views partnerships as an intermediate governance form - a form in between open-market trading and full integration - chosen to curb the costs of opportunism and contracting in the market (Kogut, 1988, pp. 320). By allying, the partnering firms create safeguards, e.g., shared ownership and contracts, that reduce the threat of opportunism, thereby lowering the transaction costs relative to a pure market exchange (Williamson, 1979, pp. 245–246). TCE thus provides a rationale for alliances as a form of hybrid governance that economizes on transaction costs when neither market nor full merger is optimal. However, TCE also cautions that alliances carry their own bureaucratic and coordination costs, so firms must align governance structure with transaction characteristics to achieve efficiency.

Resource-Based View

The Resource-Based View (RBV) of the firm explains alliances as a way to access and combine valuable resources that lie outside a firm's boundaries. RBV conceives firms as bundles of resources and capabilities and posits that competitive advantage stems from owning or controlling valuable, rare, inimitable, and well-organized resources. Because no firm has all the resources or expertise it needs, alliances become a strategy for obtaining complementary resources or capabilities from partners (Wernerfelt, 1984, pp. 171–172). For example, a company strong in manufacturing might ally with a firm strong in Research and Development (R&D) to jointly develop a new product, each contributing different critical resources. Many such resources - including knowledge, technological know-how, reputational assets, and distribution networks - often prove challenging to trade or acquire solely through market contracts (Yasuda, 2005, pp. 765–766). According to Yasuda (2005, p. 765), firms form strategic alliances when they require "additional resources that cannot be purchased via market transactions but are available from partners." By leveraging each other's strengths, alliance partners can create synergy because the combined value of their resources is greater than the sum of what each could achieve alone (Wernerfelt, 1984, p. 175; Yasuda, 2005, p. 766). Alliances thus enable resource sharing, knowledge transfer, and capability development, which can enhance innovation and performance. Overall, the RBV provides a strong theoretical foundation for why alliances are a strategic tool for resource access and competitive advantage.

The Relational View

While RBV focuses on firm-internal resources, the relational view extends the source of competitive advantage to the between-firm level. The relational view, proposed by Dyer and Singh (1998), argues that a firm's critical resources may span beyond its boundaries, residing in inter-firm routines and partnership-specific assets. Dyer and Singh (1998, p. 661–671) identify four potential sources of what they call "relational rents" (above-normal returns) that can arise from strategic alliances:

1. Investments in relation-specific assets are partners' investments specialized to the relationship like co-developed technologies or dedicated facilities (Dyer & Singh, 1998, pp. 661–662).

2. Knowledge-sharing routines describe the joint processes by which partners exchange and create knowledge. Dyer and Singh (1998, p. 665) propose that the greater the alliance partners' investment into the knowledge-sharing routines, the greater the potential for above-normal returns.

3. Complementary resource endowments are distinctive resources each partner contributes that together create unique value. The rarer and harder to imitate the created resource, the greater the potential returns (Dyer & Singh, 1998, p. 667).

4. Effective Governance plays a key role in the creation of relational rents because alliance governance mechanisms - either formal contracts or informal trust-based norms - lower transaction costs and encourage value-creating behaviors (Dyer & Singh, 1998, pp. 669–671).

When firms successfully develop these facets in an alliance, they can generate inter-organizational competitive advantage, meaning the alliance gains benefits that neither firm could obtain alone. The relational view thus underpins the idea that alliances can create value in their own way, not just ways to cut costs or fill resource gaps. It emphasizes collaboration quality – e.g., building trust, alignment, and joint problem-solving – as key to unlocking so-called relational rents (Dyer & Singh, 1998, pp. 675–676).

In summary, the relational view provides a theoretical lens where the relationship itself is the unit of analysis and driver of competitive advantage, complementing firm-centered views like RBV.

Social Network Theory

Unlike the alliance research theories discussed earlier, which examine bilateral partnerships, social network theory examines how a firm's network of multiple alliances and connections confers advantages. This perspective suggests that economic actions, such as forming alliances, are rooted in a larger social context of inter-firm networks (Granovetter, 1985, pp. 481–483; Gulati, 1998, pp. 293–295). Gulati (1998, p. 295) argues that a firm is not an island; its success is determined by its position in the inter-organizational network, the structure of relationships among firms, and the social capital these relationships provide. A company located centrally within an industry network or having prior alliance experience with many partners may find it easier to form new alliances. Moreover, the structure of the alliance network (such as having bridging ties between otherwise disconnected firms or being part of a dense cluster of collaborating firms) can shape the flow of innovation and knowledge (Gulati, 1998, p. 296).

In short, social network theory contributes a relational and structural view: alliances are not only bilateral agreements driven by immediate needs but also part of a more extensive web of inter-firm relationships that influence firm behavior and performance.

The technology sector offers a vivid context to observe strategic alliances, as tech industries are characterized by rapid innovation cycles (Leibniz-Zentrum für Europäische Wirtschaftsforschung et al., 2022, p. 5), high R&D costs (European Commission, 2024), and the need for complementary technical standards or platforms (wer liefert was, 2017).

Hence, strategic alliances have emerged as a pivotal mechanism for firms striving to maintain competitive advantage amid rapid innovation and global market integration in the technology sector. Drawing on the insights of Vonortas and Zirulia (2015, pp. 7–8) and Mbabu and Ombok (2024, p. 43), it is evident that these alliances operate on two dimensions: the micro level, where firm-specific attributes and the complementarity of the two partners drive the formation of alliances, and the meso level, where the structure and dynamics of alliance networks facilitate the diffusion of knowledge and technological advancements. The term *'meso'* (from the Greek mésos, meaning *'middle'* or *'intermediate'* (Dudenredaktion, n.d.)) refers here to the network level, which bridges individual firms and the broader industry landscape.

At the micro level, firms form strategic technology alliances to access complementary resources and capabilities that are not readily available in-house. As noted by Vonortas and Zirulia (2015, p. 6), attributes such as firm size, R&D intensity, and previous collaboration experience play critical roles in determining a firm's propensity to engage in alliances. These characteristics are essential for overcoming internal limitations, enabling firms to accelerate innovation and reduce the risks associated with high R&D investments. Concurrently, Mbabu and Ombok

(2024, pp. 43–44) emphasize that, from a RBV perspective, alliances enable firms to leverage external competencies while mitigating transaction costs.

On the meso level, the benefits of strategic alliances extend beyond the sum of an individual firm's capabilities. The properties of alliance networks, such as clustering, short average path lengths, and preferential attachment, foster an environment where knowledge flows seamlessly among interconnected firms (Vonortas & Zirulia, 2015, pp. 7–8, pp. 13–17). Vonortas and Zirulia (2015, pp. 8–12) argue that such network structures enhance the overall capacity of the sector to innovate by enabling rapid dissemination of technological know-how. Similarly, the comparative analysis by Mbabu and Ombok (2024, pp. 44–45) reveals that these network dynamics underpin innovation and bolster firm competitiveness by facilitating risk-sharing, operational efficiencies, and market expansion.

Integrating these micro- and meso-level perspectives underscores the multifaceted role of strategic alliances in the tech industry (Mbabu & Ombok, 2024, p. 43). While the micro-level determinants focus on the strategic alignment of internal resources with external opportunities (Vonortas & Zirulia, 2015, pp. 8–13), the meso-level dynamics highlight the importance of robust network structures that support continuous learning and adaptability (Vonortas & Zirulia, 2015, pp. 13–18). In high-technology environments, where the pace of change is relentless, such alliances become indispensable for sustaining long-term growth and competitive positioning (Mbabu & Ombok, 2024, pp. 43–45).

2.2.2 SAP's Strategic Partnerships

This section introduces SAP's categorization of its partnerships. According to SAP SE (n.d.), SAP differentiates into four main categories:

1. **Global Strategic Consulting Partners:**
   In this category, SAP collaborates with leading consulting firms—such as Bain & Company, Boston Consulting Group, Kearney, and McKinsey—to support its customers in achieving strategic business transformation.

2. **Global Service Partners:**
   SAP works with consulting firms like Accenture, Deloitte, Ernst&Young (EY), and PricewaterhouseCoopers (PwC) to offer a broad range of business consulting and solution implementation services. These partnerships enable SAP to deliver comprehensive support to its customers throughout their digital transformation journeys (SAP SE, n.d.)).

3. **Cloud Infrastructure Partners (Hyperscalers):**
   Also known as hyperscalers (SAP SE, 2022a), these partners provide the essential cloud infrastructure needed to run SAP technologies. Notable partners in this category include Amazon Web Services (AWS), Google Cloud, and Microsoft , which ensure that SAP and its customers benefit from scal- Azure? able and reliable cloud solutions (SAP SE, n.d.).

4. **Global Technology Partners:**
   This group encompasses a wide range of technology vendors that support SAP's ecosystem with various products, including hardware, databases, storage systems, and networking solutions. Partners such as Collibra — active within the open data ecosystem — and companies like NetApp, NVIDIA, VMWare, and Oracle fall under this category (SAP SE, n.d.).

SAP's partners within the aforementioned open data ecosystem currently are Databricks, Confluent, Collibra, DataRobot, and Google Cloud (SAP SE, 2025c, p. 13).

Additionally, SAP implements a dual framework to showcase partner expertise, which is divided into two interlocking components: Competency and Specialization (SAP SE, 2023c).

Competency Designations are structured into three tiered levels that reflect the maturity and breadth of a partner's SAP practice:

1. **Essential:**
   Partners at the Essential level have met the fundamental training and delivery requirements by achieving at least one SAP product or process specialization. This designation assures customers that the partner possesses the

necessary fundamental expertise and has demonstrated successful project delivery (SAP SE, 2023c).

2. **Advanced:**
   The Advanced level indicates an evolved SAP practice. Partners on this tier typically have more certified consultants, enhanced platform integration capabilities, and a greater number of successfully completed projects. This level signals a more profound, more robust expertise and a higher track record of customer success (SAP SE, 2023c).

3. **Expert:**
   The highest tier, Expert, is reserved for partners who have demonstrated exceptional customer success and comprehensive experience across the entire solution portfolio of a specific business area. These partners can manage complex, end-to-end transformation projects, providing significant added value to their customers (SAP SE, 2023c).

In contrast, Specialization Designations are not tiered. They prove a partner's expertise at the product or process level. Achieving a single specialization is equivalent to reaching the Essential level within a specific domain. For example, the "Core HR and Payroll" specialization is a distinct indicator of competency within the Human Capital Management area, and it contributes to building the broader Human Capital Management (HCM) competency (SAP SE, 2023c).

This dual system—combining tiered Competency Designations with non-tiered Specialization Designations—enables SAP partners to clearly and distinctively present their capabilities. Prospective customers can easily discern a partner's strengths, whether it is through comprehensive expertise across business processes or deep, focused knowledge of specific products or processes (SAP SE, 2023c).

Overall, SAP has an extensive partner network comprising more than 22,000 partners in 2024, all operating independently of SAP to complement SAP's business by selling software or cloud services, developing complementary software, and providing implementation or consulting services (MarketLine, 2024, p. 4).

3 Methodology

This study integrates three methodological approaches: a literature review, a qualitative content analysis, and a social network analysis. The literature review establishes the theoretical foundation for this thesis. Building on this foundation, the qualitative content analysis systematically and methodically structures texts to interpret latent and manifest content. The social network analysis, in turn, quantifies and visualizes structural relationships between actors in the ecosystem, revealing key influencers and network dynamics.

3.1 Literature Review

The literature review is essential, as relating research to existing knowledge is the cornerstone of all academic research activity (Snyder, 2019, p. 333). Therefore, an effective literature review is critical to creating a firm foundation for the later performed research. Snyder (2019, p. 334) describes the consideration of prior literature as "essential for all research disciplines and all research projects."

3.1.1 Systematic Review

A systematic approach to literature review is vital when dealing with large amounts of content, thus facilitating a more profound comprehension of the subject under review (Jesson et al., 2011, pp. 103–105). In this thesis, a literature review following a systematic approach was employed to establish the theoretical background. The review commenced with general searches and iterative refinements of the search parameters, progressing systematically from broad to specific.

Booth et al. (2008, pp. 75–76) suggest that researchers confronted with unfamiliar topics can benefit from first reviewing non-scientific sources on the internet (e.g., via search engines such as Google) to get a first understanding of a subject. Hence, the literature research for theoretical background began with general searches using non-academic search engines. Although most sources did not meet scientific standards and were not utilized as reference work for this thesis, they provided initial keywords. For example, using the Google search engine for defining the theoretical background's topics (e.g., strategic collaborations) returned keywords such as *business, joint-venture,* and *globalization*.

Subsequently, the focus of the literature research shifted to academic search engines such as Google Scholar and databases such as EBSCOhost, JSTOR, ScienceDirect, and SemanticScholar, in addition to the university's library catalog. Elements of the theoretical background are drawn from SAP internal sources or publicly available information, including books published by SAP PRESS, given that this thesis was conducted exclusively within the SAP environment.

Given the sheer volume of sources returned by search engines such as Google Scholar and databases like EBSCOhost, it was necessary to refine the search queries using Boolean operators such as *AND, OR, NOT,* and *NEAR* as proposed by Prexl (2016, p. 105). As other literature reviews are instrumental sources for gaining a first understanding of a topic (Booth et al., 2008, p. 69), the search queries were refined to reflect this. Using the aforementioned keywords, searches like "*business*" *AND* "*joint-venture*" *AND* "*literature review*" were performed.

For each source that was subsequently identified, it was necessary to ensure that its relevance and credibility were assured. A preliminary evaluation of each source was conducted by skimming the article's abstract, introduction, and conclusion. In addition, electronically available sources were also inspected for specific keywords relevant to the topic (Prexl, 2016, pp. 107–109).

Most sources cited in this thesis are journal articles and books. A key indicator of its credibility is its publisher's academic reputation (Booth et al., 2008, pp. 77–78).

The credibility of the cited works in this thesis was examined by consulting journal rankings—particularly those covering strategic management and information systems—such as the *VHB Publication Media Rating 2024*, published by the German

Academic Association for Business Research (2024) (Verband der Hochschullehrerinnen und Hochschullehrer für Betriebswirtschaft e.V.). Additionally, the number of citations of a given source in Google Scholar or SemanticScholar and the citing authors' reputation provide further indication of credibility (Booth et al., 2008, p. 79).

Based on the outlined credibility assessment, the articles and books cited within this thesis originate from reputable journals like the Academy of Management Journal, the Strategic Management Journal, and Technovation.

3.1.2 Empirical Review

The preceding section established how a theoretical foundation was built based on systematic literature research on the underlying concepts and models. The present literature review focuses on the empirical dimension of the study. The aim is to gain practical insights into the BDC partner landscape and the associated exchange processes.

For this study, company documents, press releases, technical reports, and strategic communication documents provided information about the actual interactions and cooperation structures within SAP's open data ecosystem. This empirically orientated analysis forms the basis for the subsequent qualitative content analysis and the further investigation of network dynamics.

At the outset of this research, guiding research questions were formulated to identify key partners within SAP's open data ecosystem and their extended partnership networks (Jesson et al., 2011, pp. 12, pp. 73–75). Specifically, this study seeks to map the interconnections between SAP BDC and its partners and examine the role of corporate and technical communication in shaping narratives around data exchange and collaboration.

Therefore, this literature review focuses on corporate documents, like press releases, investor relations communications, and industry reports, rather than traditional academic sources. These sources provide real-world insights into strategic partnerships, business objectives, and technological integration, which are essential for understanding BDC 's ecosystem dynamics.

As mentioned, the search process involved reviewing various corporate documents, including press releases detailing partnership announcements and strategic collaborations, investor relations reports discussing SAP's positioning and partner strategies, and technical documentation outlining data exchange mechanisms and integration models within BDC.

These sources were selected based on their direct relevance to the research focus. The search strategy was designed to maximize coverage by incorporating keyword-based searches using terms such as *"SAP Business Data Cloud," "press release," "technical documentation"*, and *"partners"*. Manual searches and targeted website exploration of corporate repositories were also included to ensure access to the most recent materials (Prexl, 2016, pp. 30–34, pp. 107–111).

Conversely, documents were excluded if they lacked transparency regarding authorship or sources, were overly promotional without providing concrete data or strategic insights, or contained outdated or information irrelevant to the research questions (Prexl, 2016, pp. 30–34).

At this point, discussing the challenges of using grey literature like corporate reports and technical documentation is important. While they may provide insight into industry trends and ecosystem structures, corporate sources may also frame information to align with branding and strategic positioning, leading to selective disclosure and potential biases. Unlike academic literature, corporate materials do not undergo formal peer review, affecting credibility and neutrality. Lastly, certain aspects of BDC 's partnership dynamics may not be publicly disclosed due to confidentiality or competitive concerns (Jesson et al., 2011, pp. 54–56; Prexl, 2016, pp. 107–111).

Despite these limitations, grey literature remains a valuable source of real-world partnership data. By combining content analysis with social network analysis, this study systematically evaluates these sources to extract patterns and insights into BDC 's open data ecosystem.

Based on the outlined approach, this empirical literature review has successfully aggregated various corporate documents, press releases, technical reports, and strategic communications that elucidate the real-world dynamics of SAP's open data ecosystem.

3.2 Qualitative Content Analysis

After the systematic approach to literature research and the targeted selection of relevant theoretical and empirical sources were explained in detail in the previous section, the focus is now on the content analysis of the data obtained. The qualitative content analysis makes it possible to examine the communication and cooperation patterns in the company documents, press releases, and technical reports, thus allowing a deeper understanding of the strategic positioning within the BDC ecosystem.

Qualitative content analysis is a systematic, rule-based method for analyzing textual data while maintaining an interpretative approach. It is beneficial in research areas that require structured categorization and contextual interpretation (Mayring and Fenzl, 2022, p.691–692; Krippendorff, 2004, pp. 18–21), such as business ecosystems and partnership dynamics.

This study uses qualitative content analysis to analyze corporate communication, technical documentation, and strategic reports related to BDC partnerships. By systematically coding and interpreting the content of these materials, the analysis aims to extract exchange patterns, collaboration structures, and strategic positioning within SAP's open data ecosystem.

Mayring and Fenzl (2022, pp. 691–395) define qualitative content analysis as a systematic yet flexible method that enables researchers to analyze textual material by categorizing and interpreting its meaning. Unlike purely quantitative content analysis, which focuses on word frequencies and statistical patterns, qualitative content analysis maintains an interpretative lens that allows researchers to examine latent meanings, contextual nuances, and thematic structures (Mayring and Fenzl, 2022, pp. 691–695; Krippendorff, 2004, pp. 15–17; pp. 87–89).

Core characteristics of qualitative content analysis include a strictly rule-governed analysis. Coding and categorization follow predefined methodological steps to ensure systematic and reproducible results. The categories themselves can be either derived from the data (inductive approach) or be based on a pre-existing theoretical framework (deductive approach) (Mayring & Fenzl, 2022, pp. 692–698). Another feature of qualitative content analysis is that it considers not only explicit textual elements but also latent meanings and underlying themes in the content. Finally, the coding framework and categories are meant to be continuously evaluated and refined as the analysis progresses (Mayring & Fenzl, 2022, pp. 693–695).

These features make the qualitative content analysis particularly well-suited for studying corporate and technical discourse, where textual data often contains explicit descriptions and latent content, such as underlying strategic implications.

This study uses qualitative content analysis to analyze textual data related to BDC partnerships. For example, corporate press releases could be used to gain an understanding of strategic narratives in partnership announcements. Investor relations reports could help identify key business objectives behind collaborations, and technical documentation might display how data-sharing processes are communicated.

By applying qualitative content analysis to BDC-related texts, the study aims to identify what types of information are exchanged in partnerships and whether common patterns in such exchanges exist.

3.3 Social Network Analysis

The qualitative content analysis provides valuable insights into the content structures and strategic narratives of partner communication. However, in order to comprehensively illuminate the structural relationships and dynamics in the SAP BDC partner network, the next step is social network analysis.

Social network analysis is a methodological framework used to examine relationships and interactions among entities within a network. It is widely applied across disciplines such as sociology, economics, and business research to understand how actors - whether individuals, organizations, or institutions - are interconnected (Wasserman & Faust, 1994, pp. 3–5). Since social network analysis emphasises the relational ties between entities, it is particularly suited for studying interconnected ecosystems such as BDC's partner landscape.

A first critical step in social network analysis is defining the actor set and specifying network boundaries (Wasserman & Faust, 1994, pp. 19–20, pp. 31–33). The nodes in the network represent entities (e.g., SAP's direct and indirect partners), while the edges between two actors capture their relationship, such as strategic collaboration, technical partnerships, or data-sharing agreements.

Networks can be described through the collection of its links. For the network depicted in Figure 3.1 that would be {(1, 2), (1, 3), (2, 3), (2, 4)}. Generally a network is described via an adjancy matrix. The adjacency matrix of directed a network of N nodes has N rows and N columns with its elements being (Barabási, 2016, ch. 2.4):

$A_{ij} = 1$ if there is a direct link between the nodes j and i.
$A_{ij} = 0$ if the nodes j and i are not connected to each other.

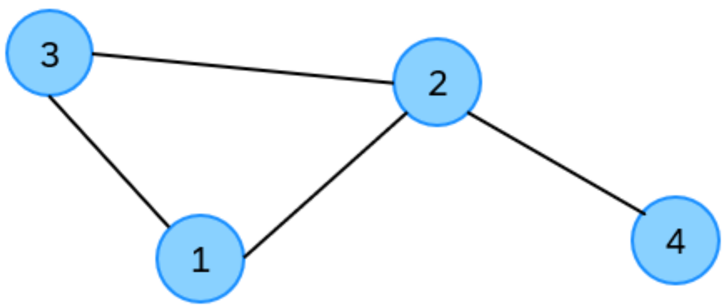

Figure 3.1: A Simple Network. Adapted from Barabási (2016).

The adjacency matrix of an undirected network has two entries for each link, e.g. link (1, 2) is represented as $A_{12} = 1$ and $A_{21} = 1$. Hence, the adjacency matrix of an undirected network is symmetric, $Aij = Aji$ (Barabási, 2016, ch. 2.4).

The adjacency matrix for the undirected network depicted in Figure 3.1 would therefore look like this:

$$A_{ij} = \begin{pmatrix} A_{11} & A_{12} & A_{13} & A_{14} \\ A_{21} & A_{22} & A_{23} & A_{24} \\ A_{31} & A_{32} & A_{33} & A_{34} \\ A_{41} & A_{42} & A_{43} & A_{44} \end{pmatrix} = \begin{pmatrix} 0 & 1 & 1 & 0 \\ 1 & 0 & 1 & 1 \\ 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{pmatrix}$$

To analyze the partner landscape of BDC, several network centrality measures are employed to evaluate the significance of actors within in the landscape

Degree centrality measures the number of direct connections an actor has and indicates its level of activity or influence within the network (Wasserman & Faust, 1994, pp. 178–183). Therefore the degree k_i of a node i can be directly obtained from the elements of the adjacency matrix. For undirected networks like the one shown in Figure 3.1 a node's degree is a sum over either the rows or the columns of the matrix (Barabási, 2016, ch. 2.4):

$$k_i = \sum_{j=1}^{N} A_{ji} = \sum_{i=1}^{N} A_{ji}$$

For example, the degree of node n_2 would therefore be 3:

$$k_2 = \sum_{j=1}^{4} A_{2j} = \sum_{i=1}^{4} A_{i2} = 3$$

Closeness centrality assesses how quickly a node can reach all other nodes in the network (Wasserman & Faust, 1994, pp. 183–188).

Wasserman and Faust (1994, pp. 183) define the (not normalized) closeness of a node n_i this way:

$$C_C(n_i) = (\sum_{j \neq i} d(n_i, n_j))^{-1}$$

with $d(n_i, n_j)$ being the length of the shortest connection between nodes n_i and n_j.

Given the adjacency matrix we find that node n_1 is connected to nodes n_2 and n_3 directly and to node n_4 via node n_2. This results in the shortest distances $d(i, j)$ of node n_1:

- $d(1, 2) = 1$ (direct connection)
- $d(1, 3) = 1$ (direct connection)
- $d(1, 4) = 2$ (indirect connection)

$$\sum_{j \neq 1} d(1, j) = 1 + 1 + 2 = 4$$

We can now calculate the closeness of node n_1:

$$C_C(n_1) = (\sum_{j \neq 1} d(n_1, n_j))^{-1} = \frac{1}{\sum_{j \neq 1} d(n_1, n_j)} = \frac{1}{4} = 0,25$$

Betweenness centrality identifies nodes that serve as intermediaries in the flow of information or resources between other actors. Nonadjacent actors depend on these intermediary nodes to relay information and resources, which is why intermediary actors potentially have some control over the interactions between the two nonadjacent actors (Wasserman & Faust, 1994, pp. 188–192).

Wasserman and Faust (1994, p. 190) define the betweenness centrality of a node n_i as follows:

$$C_B(n_i) = \sum_{j<k} \frac{g_{jk}(n_i)}{g_{jk}}$$

with j and k being different nodes in a network, g_{jk} being the amount of the shortest path from j to k, and $g_{jk}(n_i)$ being the amount of shortest paths from j to k running through node n_i.

Given the adjacency matrix, node n_1 is connected to 2 and 3, node n_2 is connected to 1, 3 and 4, node n_3 is connected to 1 and 2 and node n_4 is connected with node n_2. Now we consider all unordered pairs (j, k) with $j < k$ from {1,2,3,4}:

1. (1,2)
2. (1,3)
3. (1,4)
4. (2,3)
5. (2,4)
6. (3,4)

We now continue with the pair (1,2) as an example. The shortest path from n_1 to n_2 ([1,2]) has the length 1. Also there is only this path, because alternative paths such as [1,3,2] would be longer (length 2). There are also no nodes inbetween, because the path consists of only the endpoints n_1 and n_2. Therefore:

$$g_{12} = 1,\ g_{12}(1) = 0,\ g_{12}(2) = 0,\ g_{12}(3) = 0,\ g_{12}(4) = 0$$

Table 3.1 shows the shortest paths between each pair of nodes (with $j < k$). For every node pair, it lists the actual shortest path, the number of such paths (in this example, each pair has only one), and identifies which node(s) serve as intermediate nodes (i.e., those that are not one of the endpoints). This table serves as the basis for calculating the betweenness centrality by determining which nodes lie on the shortest paths between other nodes.

Pair (j, k)	Shortest Path(s)	Number of Shortest Paths	Intermediate Node(s)
(1,2)	[1–2]	1	–
(1,3)	[1–3]	1	–
(1,4)	[1–2–4]	1	2
(2,3)	[2–3]	1	–
(2,4)	[2–4]	1	–
(3,4)	[3–2–4]	1	2

Table 3.1: Shortest paths between all node pairs (j, k) (with $j < k$).

Now, the betweenness centrality can be calculated. For example, node n_1 never acts as an intermediate as seen in Table 3.1. Therefore its betweenness centrality is $C_B(1) = 0$.

Node n_2 on the other hand acts as an intermediate node in two cases:

$$[1, 2, 4] \Rightarrow g_{14}(2)/g_{14} = 1/1 = 1$$

$$[3, 2, 4] \Rightarrow g_{34}(2)/g_{34} = 1/1 = 1$$

Table 3.2 summarizes the role of each node as an intermediate in the network. It lists the number of times each node appears on a shortest path between two other nodes, which is directly used to determine its unnormalized betweenness centrality value. In this example, only node 2 acts as an intermediary, leading to its higher betweenness centrality.

Node	Number of Times as an Intermediate Node	Betweenness Centrality*
1	0	0
2	2	2
3	0	0
4	0	0

Table 3.2: Summary of the number of shortest paths in which each node appears as an intermediate node (*unnormalized betweenness values).

While social network analysis provides a robust framework for mapping relationships, certain limitations regarding its use case in this study must be acknowledged. Firstly, social network analysis relies heavily on available and observable ties. Strategic partnerships may be informal or undisclosed and, therefore, be unavailable for analysis. Secondly, the analysis results capture a snapshot of the relationship at a given time. BDC's launch was fairly recent, and its partner network is still developing and evolving dynamically.

Social network analysis is a robust methodological tool for understanding BDC's partner landscape. This study aims to identify key strategic actors, collaboration patterns, and structural gaps within SAP's open data ecosystem by analyzing relational structures through the mentioned centrality measures, network graphs, and cluster identification.

4 Empirical Analysis

In this chapter the structured empirical analysis is conducted to examine the exchange processes within BDC partner network.

4.1 Empirical Approach

The empirical analysis in this study follows a structured methodological approach, integrating three key components: Literature Review, Qualitative Content Analysis, and Social Network Analysis. The process is systematically visualized in the figure 4.1, illustrating the sequential and interconnected steps of the research methodology.

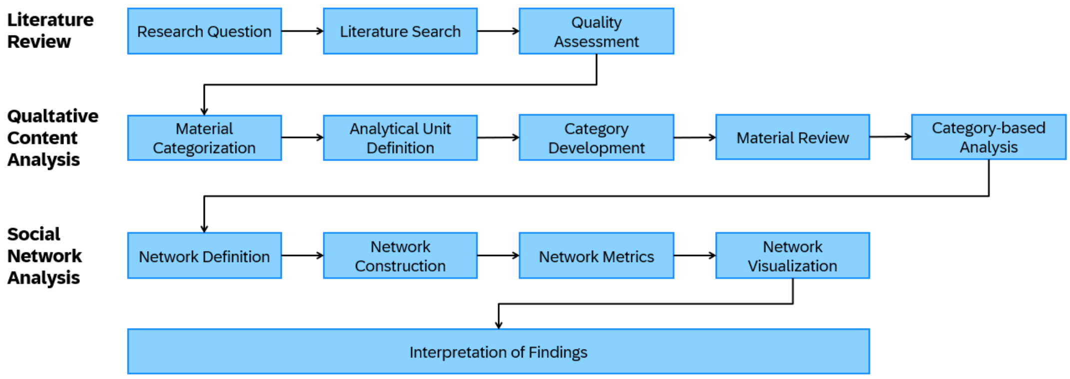

Figure 4.1: Methodolgical Approach (Own Depiction)

typo in picture (see qualitative)

The Literature Review serves as the theoretical foundation of the study. The first step involves the development of the research question(s), ensuring a precise formulation of the problem statement. This is followed by a systematic literature search to identify relevant academic publications, technical reports and industry documentation. To ensure methodological rigor, a quality assessment is conducted, allowing only reliable sources to be incorporated into the analysis.

Building on the theoretical framework, a Qualitative Content Analysis is employed to systematically structure and categorize the exchange processes within BDC's partner network. The first phase involves material categorization, followed by the definition of analytical units, which delineate the fundamental elements of analysis. Based on this, a category development process is conducted to classify the interaction patterns. The collected material undergoes a systematic review, ensuring consistency in the coding process, before a category-based analysis is performed to identify recurring trends and strategic implications.

To complement the qualitative findings with a structural perspective, a Social Network Analysis is conducted. The process begins with network definition, identifying key entities and their relationships within the ecosystem. The next step, network construction, structures the gathered data into a network model, facilitating subsequent quantitative analysis. Various network metrics—such as degree centrality, betweenness centrality, and closeness centrality—are calculated to determine the strategic importance of different nodes. The results are then visually represented through network visualization, which provides insights into the structural patterns of the partner network.

The final stage integrates the findings from both the Qualitative Content Analysis and Social Network Analysis into a comprehensive interpretation. By combining structural and content-based insights, the study aims to provide a holistic understanding of the exchange processes within the SAP Business Data Cloud ecosystem, identifying strategic opportunities and potential optimizations for future partnerships. The figure illustrates the logical progression of this methodological approach, emphasizing the interconnected nature of the research steps leading to the final interpretation of findings.

4.1.1 Literature Review Approach

The literature review was conducted following a structured methodology, ensuring a comprehensive, systematic, and critical analysis of existing sources. The approach aligns with established best practices outlined by Jesson et al. (2011, p. 12) and Prexl (2016, pp. 58–59).

To establish a solid foundation, the most suitable type of literature review was determined based on the research objectives. As described by Jesson et al. (2011, pp. 73–88, pp. 103–127), literature reviews can be categorized into traditional narrative reviews and systematic reviews. Given the exploratory nature of this study and the need for a broad synthesis of existing knowledge, a traditional, critical review was chosen over a fully systematic review. This decision allowed for flexibility in integrating diverse sources while maintaining analytical rigor.

In total two research question were formulated to guide the research:

1. What structural patterns and collaboration dynamics can be identified in the BDC partner network?
2. What strategic opportunities arise from analyzing the BDC partner network thorugh a business and social network analysis perspective?

Clear inclusion and exclusion criteria were set, considering relevance, publication date and usefulness of the content. This step ensured that only high-quality and pertinent sources contributed to the final synthesis, as emphasized by Prexl (2016, p. 44).

For example, only sources published in the last five years (from 2021 onward) were considered to ensure relevance to current trends in data ecosystems, Peer-reviewed journal articles, conference papers, and industry reports as well as press releases from recognized organisations (e.g. SAP, Google, AWS) were prioritized. Furthermore, non-peer-reviewed sources, such as blog posts and opinion articles, were omitted to maintain methodological rigor.

A detailed breakdown of all inclusion and exclusion criteria is provided in Appendix X.

To maintain objectivity overly promotional sources were excluded to avoid potential bias. Other predefined evaluation criteria, assessing spects like research design, could only be used selectively since most sources where grey literature.

This structured approach ensured a critical, systematic, and comprehensive synthesis of existing research.

4.1.2 Qualitative Content Analysis Approach

The study employs qualitative content analysis to systematically examine the exchange processes and collaboration dynamics within the SAP BDC partner network. Qualitative content analysis provides a structured method to categorize and interpret qualitative data, ensuring a rigorous and replicable analysis. The research follows an inductive category formation approach, allowing patterns and themes to emerge from the data rather than being predetermined.

This section will introduce the approach and process flow of the applied approach for qualitative content analysis. A depiction of the process flow is shown in Figure 4.2.

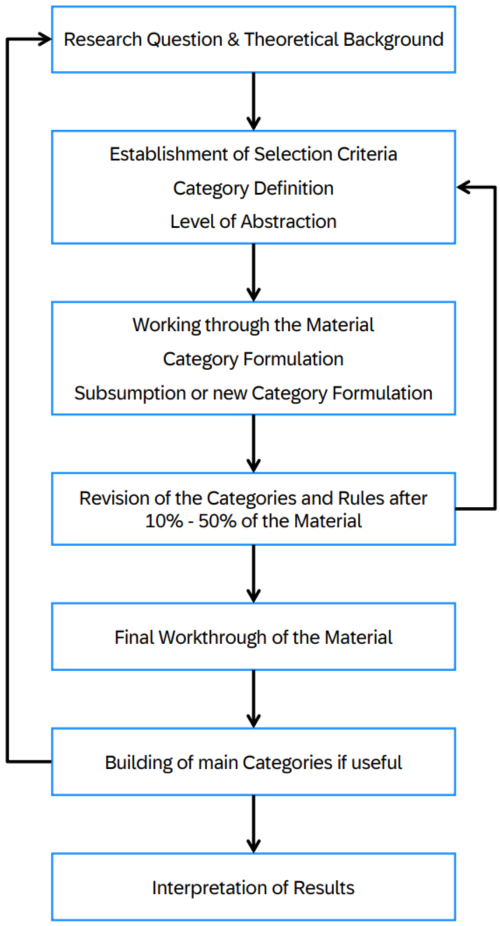

Figure 4.2: Qualitative Content Analysis Process Flow (Own Depiction)

The analysis is guided by the following to research questions:

1. What structural patterns and collaboration dynamics can be identified in the BDC partner network?
2. Which players collaborate, and in what ways?

GGf. Anpassen

Mixed-Methods Approach

A Mixed-Methods Approach that combines both deductive and inductive category development is particularly beneficial for qualitative content analysis for several reasons.

First, a deductive approach provides a structured framework for analysis by incorporating existing theoretical concepts. This ensures comparability and systematic categorization, as the research builds upon established academic foundations. For example, if literature already distinguishes between technology, market, and strategic partnerships, these categories can serve as a predefined structure for the analysis.

However, relying solely on a deductive approach could result in overlooking emerging patterns or new themes within the data. This is where the inductive approach becomes essential. By allowing categories to emerge from the data itself, the analysis remains open to unexpected findings that may not have been previously considered in the literature. For instance, if corporate communications frequently highlight sustainability aspects in partnerships—an aspect not initially included in the theoretical framework—it can be incorporated as a new, relevant dimension of the study.

A Mixed-Methods Approach effectively combines theoretical grounding with empirical openness. It ensures that the research is both anchored in established knowledge while remaining adaptive to real-world developments. This dual approach significantly enhances both reliability and validity:

- Deductive categories enhance reliability by providing a clear, replicable coding structure, ensuring consistency across the analysis.

- Inductive categories improve validity by reflecting actual patterns in the data rather than being constrained by theoretical assumptions.

Ultimately, a Mixed-Methods Approach strikes a balance between structure and flexibility: it leverages existing theoretical insights while allowing for new discoveries. This combination is particularly valuable when the goal of the research is not only to validate pre-existing concepts but also to uncover new connections—which is especially relevant when analyzing corporate partnerships.

4.1.3 SAP BDC's partner landscape

...

DataRobot

...

Collibra

...

Confluent

...

Databricks

...

Google Cloud and Google BigQuery

...

4.1.4 Expansion of the Network

4.2 Findings and Discussion

...

4.2.1 Research Findings

nennen und diskutieren

4.2.2 Reflection on the Methodology

diskutieren

4.3 Strategic Implications for SAP (Handlungsempfehlung)

5 Conclusion

... wichtige punkte auf kapitel verweisen

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Appendix

A Qualitative Content Analysis Coding Guidelines

Category	Name	Definition	Coding Rule	Example
Type of Partnership	Technology Partnership	Companies cooperate primarily for the integration of technologies, data exchange, or API interfaces.	Highlight text passages that refer to technical integration or joint developments of IT systems.	Through the collaboration between SAP and Databricks, we enable seamless zero-copy integration.
	Market Partnership	Companies collaborate to develop joint market strategies or go-to-market initiatives.	Capture all statements about joint sales strategies, co-marketing, or market launches.	SAP and Informatica are joining forces to offer their solutions together in the market.
	Strategic Alliance	Long-term collaborations with strategic significance, often involving capital participation or long-term investments.	Mark all passages describing long-term cooperation or financial engagements.	This strategic alliance between SAP and Google Cloud will strengthen corporate growth in the long term.
Exchange Processes within the Network	Data Integration (Zero-Copy & Co.)	Partner companies enable data exchange without physically copying the data.	Capture mentions of Zero-Copy integration, API interfaces, or data platforms.	With the Zero-Copy data strategy, partners can access real-time data without redundant copies.
	Knowledge Transfer	Partners exchange know-how, best practices, or research findings.	Mark all references to knowledge transfer, training, or educational initiatives.	SAP and Collibra are working together to provide best practices for data management.
	Co-Branding & Co-Marketing	Companies appear together in external communication to promote their products or solutions.	Capture statements about joint advertising campaigns or trade show appearances.	Our co-marketing initiative highlights the strengths of both companies.
Strategic Positioning within the Partnership	Dominant Actor	One company takes the lead in the partnership or dictates the direction.	Capture references to unequal resource usage or advantages for one party.	This integration primarily helps smaller partners benefit from SAP's global network.
	Equal Cooperation	Both companies operate on equal footing and share responsibility.	Mark terms like "equal," "partnership-based," or similar expressions.	This partnership is based on mutual trust and equal collaboration.
	Asymmetric Cooperation	One company benefits more than the other, or one party assumes more responsibility.	Capture references to unequal resource usage or advantages for one party.	This integration primarily helps smaller partners benefit from SAP's global network.
Narratives in Corporate Communication	Innovation Focus	The partnership is portrayed as a driver of innovation.	Mark formulations emphasizing innovation, new technologies, or progress.	This partnership sets new standards for digital transformation.
	Efficiency Promise	The collaboration is justified with increased efficiency or productivity.	Capture terms like "faster," "more efficient," or "optimized."	Thanks to this collaboration, customers can execute their data processes 50% faster.
	Market Dominance	The partnership is described as market-changing or revolutionary.	Look for statements such as "leading," "game-changer," or "market standard."	This partnership revolutionizes how companies work with data.

Coding Guidelines

Ehrenwörtliche Erklärung

I hereby declare that I have independently written the present thesis on the topic: *Analysis of Exchange Processes and Strategic Opportunities in the SAP Business Data Cloud Partner Network: A Business Perspective on Zero-Copy Integration as a Market Trend* and have used no sources or aids other than those specified. Furthermore, I confirm that the submitted electronic version corresponds to the printed version.

Place, Date Konrad Lange