

Arkwright

# PLATFORM-BASED ECOSYSTEMS

BEYOND SUPER-APPS: AN ANALYSIS  
OF BUSINESS-TO-BUSINESS (B2B) CASES

INDUSTRY REPORT – OCTOBER 2022



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## **Platform-Based Ecosystems.**

**Beyond super-apps: an analysis  
of business-to-business (B2B)  
cases**

—

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# EXECUTIVE SUMMARY

Following the first Arkwright's **From Platforms to Ecosystems** report, this new one further analyzes the building blocks and the evolution of a platform-based ecosystem (PBE) business model. This second report expands on the frameworks that can be used to map and design an ecosystem value proposition, rather than analyzing the applicability and value of these models, which was covered in the first report.

The previous report outlined numerous examples of successful platform-based ecosystems in the business-to-business-to-consumer (B2B2C) space, such as Grab, K-Plus and Line. While platform-based ecosystems are commonly associated with super-app value propositions, the model also has business-to-business (B2B) applications. Successful examples include MindSphere, an internet of things proposition developed by Siemens, Tradeshift's and Coupa's procurement and business management solutions and TradeLens, which has been developed by IBM and Maersk.

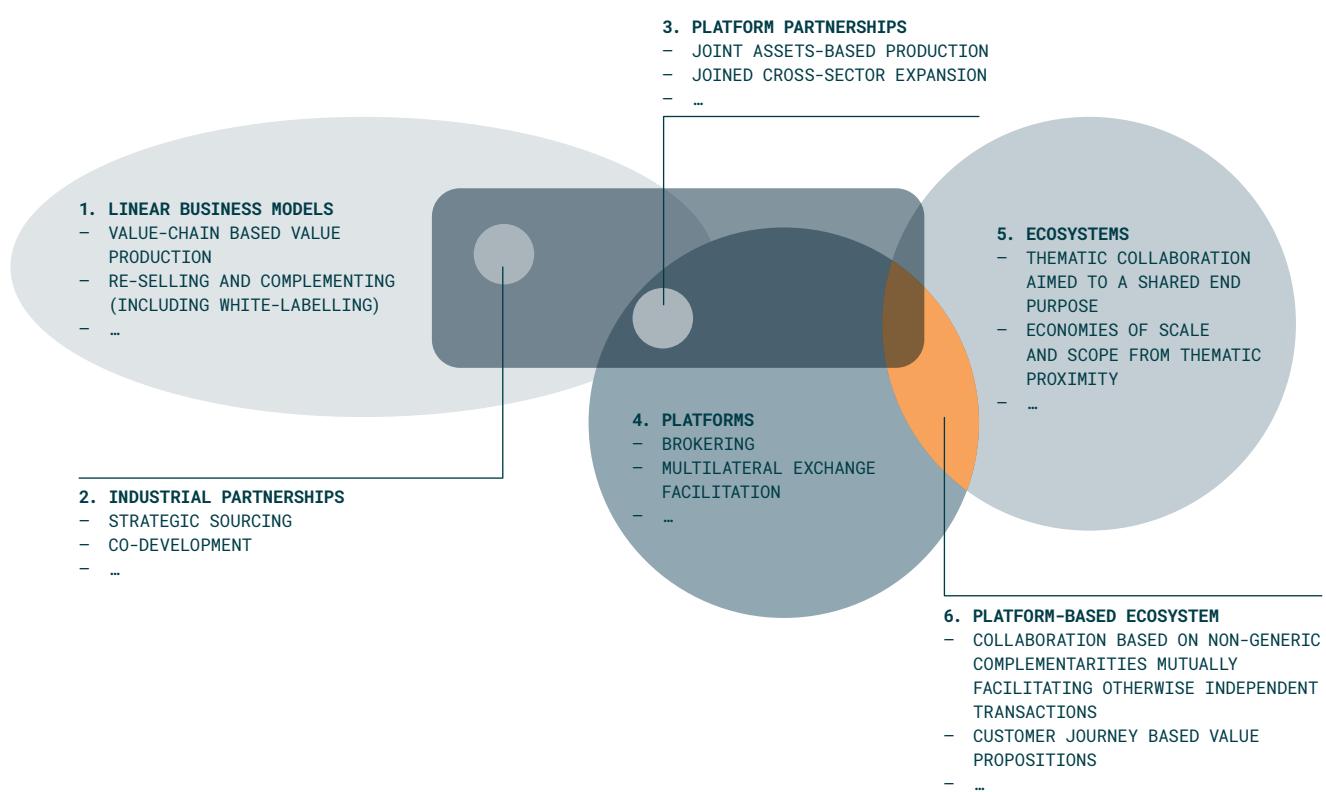
Platform-based ecosystems (PBEs), whether B2B or B2C, have become pivotal within many industries. The emergence of both kinds of businesses stems from the increasing demand of customers for highly personalized experiences and the convenience of 'one-stop-shops'. The bundling of products, services and enablers across company portfolios, along with a seamless and integrated digital solution that gives access to all of them, is the way to meet that demand.

PBEs are highly-evolutionary business models, even if they don't start their life in that form. PBEs benefit from enhanced visibility about the transactions that are taking place within a customer journey. This in turn means they keep evolving by attracting complementary solutions and further enriching the PBE value proposition. A PBE value proposition can be mapped through frameworks such as the Platform Ecosystem Timeline. This provides retail- and business-focused companies with a logical structure to evaluate their options once a target customer journey has been identified.

Apart from the difference in nature of the transactions between B2C and B2B ecosystems, the illustrated examples in this, and the previous, report show that the building blocks, advantages and challenges of ecosystems are transferable across industries, target groups and customer journeys.

# PLATFORMS AND ECOSYSTEM BUSINESS MODELS

**Fig. 1 – Business Models Illustration.**



<sup>1</sup> Francesco Burelli, Steven Jacob and Leni Grahl, "From Platforms To Ecosystems (Developing High Value Business Models)", Arkwright 2021. <https://www.arkwright.com/project/from-platforms-to-ecosystems-developing-high-value-business-models>

Although the terms are often used interchangeably, they actually refer to different business models and methods of value generation.

The diagram in [Fig. 1](#) proposes an illustration of the different business models and how they are related to each other, while [Fig. 2](#) provides a description of the main value creation drivers.

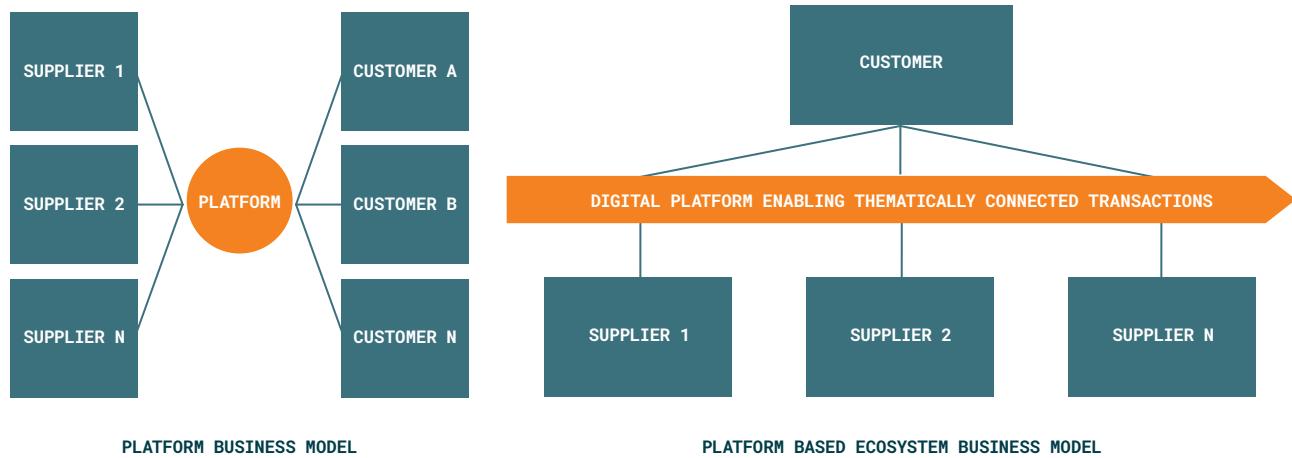
The Venn diagram groups business models based on their distinctive value creation drivers. The second and third business models, industrial partnerships and platform partnerships, are permutations of linear business models. In these partnerships, value is generated by pursuing scale and/or efficiencies vertically (with industrial partnerships) or horizontally (in the case of platform partnerships).

**Fig. 2 – Illustration of Business Models' Defining Value Creation Drivers.**

#	BUSINESS MODEL TYPE	LINEAR	STRATEGIC ALLIANCES	PLATFORMS	ECOSYSTEMS	DEFINING VALUE CREATION DRIVERS	EXAMPLE
1	Linear Business Models	X				Value in the good or service itself	Arkwright Consulting
2	Industrial Partnerships	X	X			Upstream/downstream agreements along the value chain, typically, across customer-supplier relationships creating value in the good or service itself	Apple Inc agreement with Corning Inc.
3	Platform Partnerships	X	X	X		Value from collaboration between a closed number of parties establishing closed platforms, and leveraging this shared asset, for the pursuit of mutual economies of scale	Renault-Nissan alliance
4	Platforms			X		Value from facilitation of a transaction or exchange (regardless from the nature of the transaction or exchange) between third parties	eBay
5	Ecosystems				X	Value from cross-organisational collaboration based on finality complementarities. The collaboration value generates value by itself	A private equity led restructuring; industrial districts
6	Platform-based Ecosystem			X	X	Value from facilitating transactions through non-generic complementarities within targeted thematic "customer journeys". Platform owner controls access of participants	Vitality

**Fig. 3 – Platform and Platform-Based Ecosystem business model illustration.**

The remaining three business models are all based on a multi-party transactions that occur in distinct but parallel value chains. In these models, a complementary or shared finality is the ultimate value driver. **Fig. 3** provides an illustration of the ecosystem and of the PBE business models.



As in the previous report, this report is focused on PBEs. Regardless of a PBE's target group and industry, they have fundamental principles that revolve around their respective thematic customer journeys. Therefore, the multiple services offered need to be "linked through non-generic complementarities".<sup>2</sup> These are integrated seamlessly through a shared interface or account. On one side they provide convenience to users and, on the other, lower the cost of acquisition for the participants to such value propositions. Consequently, the design of the ecosystem needs to be strategic as well as consistent. It also needs to ensure there is a clearly-defined target of non-generic, complementary activities that are linked to a seamless user experience across services.

<sup>2</sup> Michael G. Jacobides, Carmelo Cenno, Annabelle Gawer, "Towards a theory of ecosystems", Strategic Management Journal, 2018. <https://onlinelibrary.wiley.com/doi/full/10.1002/smj.2904>

After outlining multiple successful examples of B2B2C PBEs (e.g. Grab, KBank and Line) in the previous report, this analysis will focus on some B2B examples illustrated in [Fig. 4](#).

**Fig. 4 – Selection of B2B PBE examples (illustrative and not exhaustive).**

LOGISTICS & SUPPLY CHAIN	INDUSTRY IOT SOLUTIONS	MINING	COMPANY MANAGEMENT
 <b>MAERSK</b>  <b>IBM</b>  <b>TRADELENS</b>	 <b>SIEMENS</b> <b>MindSphere</b>		     

PBEs, whether B2B or B2C, have become pivotal within many industries. The emergence of both kinds of businesses stems from the increasing demand of customers for highly personalized experiences and the convenience of 'one-stop-shops'. The bundling of products, services and enablers across company portfolios, along with a seamless and integrated digital solution that gives them access to all of them, is the way to meet that demand.

# BUILDING BLOCKS OF A PLATFORM-BASED ECOSYSTEM

SOME ORGANIZATIONS MAY COVER DIFFERENT ROLES, AND, APART FROM THE ORCHESTRATOR(S), THESE ROLES ALSO TEND TO EVOLVE OVERTIME

INSEAD Knowledge's **The Five Essential Roles of Corporate Ecosystems**<sup>3</sup> article illustrated the building blocks, which are reported in Fig. 5. Some organizations may cover different roles, and, apart from the orchestrator(s), these also tend to evolve overtime. In the former Arkwright's report, Square (now rebranded Block) was analyzed as an example of an B2B PBE accompanying SMEs along their journey of opening and leading a business. Their model evolved significantly over a nine-year period.

Similarly, business spend management (BSM) platforms like Coupa, Tradeshift or Basware have been continuously complementing value propositions over the last 10 to 15 years, becoming treasury focused PBEs for multinational companies.

Their success is dependent on their ability to build an ecosystem around their business customers' needs by covering everything such as expense management, digital supply chain management, and working capital solutions. In the following, we will have a closer look at two of these BSM platform PBEs.

<sup>3</sup> Andrew Shipilov and Francesco Burelli, "The Five Essential Roles of Corporate Ecosystems", INSEAD Knowledge, 2021. <https://knowledge.insead.edu/blog/insead-blog/the-five-essential-roles-of-corporate-ecosystems-16041>

<sup>4</sup> Ibid.

**Fig. 5 – The Five Essential Roles of Corporate Ecosystems.<sup>4</sup>**

ROLE	DESCRIPTION	EXAMPLES
<b>Orchestrator(s)</b> 	Firm or a group of firms that understands (and owns) the key value proposition for the customer	Philips is an orchestrator of the eCare ecosystem that monitors – via wearable devices – the health of patients with chronic conditions even when they are not in the hospital
<b>Core partner(s)</b> 	This is a firm or a group of firms that provides the core customer base or complementary offerings needed to create value around the key value proposition	Salesforce.com and Radboud University Medical Center are Philips' core partners. While Salesforce.com contributes data analytics capabilities, Radboud University Medical Center provides access to customers (i.e. patients) and also a location to test new products
<b>Technology enabler</b> 	A provider that supports the technological operations of the ecosystem. These companies could have unique capabilities allowing the ecosystem to operate or achieve a competitive advantage	AWS provides a critical cloud-based infrastructure for the eCare ecosystem to operate
<b>Complementors</b> 	Their offerings enrich the customer value proposition, yet individually they are not critical for this value proposition to materialize	In the eCare case, these would be manufacturers of other (non-Philips) wearable devices that collect health data and would provide alerts to patient or the medical personnel
<b>Resellers</b> 	They provide the ecosystem's offerings as part of their own product or service	Insurance companies can provide eCare services to their customers. Likewise, other hospitals around the world can register their patients with eCare

Fig. 6 – Tradeshift's Ecosystem Canvas.

# MAPPING A B2B PLATFORM-BASED ECOSYSTEM (TRADESHIFT EXAMPLE)

SIMILAR TO OTHER BPEs, TRADESHIFT DID NOT START OFF AS THE FULL ECOSYSTEM IT IS TODAY. OVER TIME, IT BROADENED ITS PRODUCT OFFERING BY ORGANIC GROWTH AND INORGANIC GROWTH AS WELL AS DEVELOPING PARTNERSHIPS WITH OTHER ORGANIZATIONS

Tradeshift started off as a cloud-based supplier financing platform covering a range of services like e-invoicing and accounts payable automation.<sup>5</sup> In recent years, it has evolved to a fully-fledged B2B PBE – see Fig. 6 for an illustration through the application of the Ecosystem Canvas framework.

Tradeshift acts as the orchestrator of an ecosystem for core financial services partners such as Santander and C2FO. The ecosystem is enabled by providers of services such as Coface and sees the participation of complementary and reselling organizations. The value added for participating companies results from their 'community intelligence', consisting of insight into hundreds of companies running their internal processes and supply chain management on the Tradeshift platform. This generates data about companies' decision-making, trade flows, payment patterns, etc. that are then used by Tradeshift to:

- a) improve the services and
- b) attract new customers with regular reports about developments in international trade and other business insights.<sup>6</sup>

Tradeshift was founded in 2010 as a dynamic invoice management and B2B payment platform in Copenhagen before moving its headquarters to San Francisco in 2012 and pursuing further international expansion.

Similar to most other BPEs, Tradeshift did not start off as the full ecosystem it is today. Over time, it broadened its product offering by organic growth (e.g. the launch of Tradeshift Ada in 2017) and inorganic growth (e.g. acquisition of Hyper Travel in 2016 and IBX Business Network in 2017) as well as developing partnerships with other organizations (e.g. partnership with Invoice-ware starting from 2012). Tradeshift Pay was launched in 2018, which allowed the company to add renowned customers like Hertz and Shiseido to their list of customers.<sup>7</sup> Ultimately, this step enabled the evolution to a cloud-based service provider for efficient procurement, invoice and digital supply chain management.

<sup>5</sup> <https://tradeshift.com/>

<sup>6</sup> <https://tradeshift.com/global-trade-report/>

<sup>7</sup> <https://tradeshift.com/press/tradeshift-announces-record-year-andexceptional-growth-in-every-category-leading-into-2019/>

## What we want to do?



### Unique Value Proposition

What is the customer journey that you want to capture?



Cloud-based BSM platform connecting businesses (Tradeshift customers) with suppliers on a B2B marketplace (e-procurement).

Services for buyers include e-invoicing, Account Payable automation, virtual cards for employees, spend management and working capital solutions as well as supplier analytics and (digital) supply chain financing for both buyers and sellers.



### Competitors

Ecosystems (or platforms) that provide similar value proposition Standalone (non-platform) offerings that provide similar value proposition



**Coupa:** cloud-based full-service BSM platform including supplier, procurement, sourcing, expense & contract mgmt.; integrates with ERP.



**Basware:** Purchase-to-pay & e-invoicing, etc. solution; compatible with different ERP systems; also for smaller businesses.



**SAP Ariba:** Cloud-based platform connecting businesses and suppliers; only offers SAP (ERP) integration.



### Monetisation strategies

Advertising, freemium, cross-selling, data analytics, transaction fees, payment services, etc.

Licensing of platform access for customers with varying prices depending on the number of elements/services included.

Range of services depends on the Tradeshift customer being on the buyer- or seller side of the B2B marketplace.

### Orchestrator



Owns unique value proposition for the customer

### Tradeshift

**Tradeshift** provides a cloud-based e-procurement platform and a number of BSM-related services with the help of external partners who are adding analytical, payment and banking services.

### Core Partner(s)



Provide the core customer base or complementary offerings needed to create value around unique value proposition



**Baiwang:** SaaS (e-invoicing/tax) company opening Tradeshift to the Chinese market.

**Payment partners:** Working capital solutions (e.g. dynamic discounting) provided by external partners.

### Technology Enabler



Supports technological operations of the ecosystem

### coface TransferMate

**Managed services:** Selected partners providing important elements of the service e.g. supply chain collaboration, managing risk with suppliers' portfolio or payment processing.

### Complementors



Enrich the customer value proposition, yet individually they are not critical for this value proposition to materialise

**Supplier network:** supplier side of the platform e.g. manufacturers.

**Developer:** "Developer Center" for external providers to build apps on the Tradeshift platform.

### Resellers



Provide the ecosystem's offerings as part of their own product or service



"Tradeshift Partners" are companies selling Tradeshift's services as part of their own offering to business clients.



## Who is needed to make it happen?

Ecosystem Canvas Model © Andrew Shipilov and Francesco Burelli, 2021.

If reproducing, please cite: <https://knowledge.insead.edu/blog/insead-blog/the-five-essential-roles-of-corporate-ecosystems-16041>

Fig. 7 – Coupa's Ecosystem Canvas.

# EVOLUTION OF A PLATFORM-BASED ECOSYSTEM (COUPA EXAMPLE)

COUPA INITIALLY PROVIDED A SPEND ANALYSIS TOOL TO MID-SIZED COMPANIES. IT THEN EXPANDED WITH THE COUPA INVENTORY AND COUPA PAY SERVICE INTO SUPPLY CHAIN AND INVENTORY MANAGEMENT AND TO SUPPORT ALL CORPORATE TREASURY ACTIVITIES RELATED TO PAYMENTS

Coupa also started as a platform business model. There are many parallels between the development of Coupa and Tradeshift; both offer accounts payable automation, virtual credit cards, a B2B procurement marketplace, e-invoicing, early payment possibilities, funding, supply chain analytics, and so on.

However, Coupa goes a few steps further in its services around inventory management, strategic sourcing and business insights that derive from the transactions taking place across the platform.

**Fig. 7** provides an illustration of the Coupa's business model within the Ecosystem Canvas framework.

Starting with an open-source product in 2006 and officially founded in 2009, Coupa<sup>8</sup> operated for 10 years before going public in 2016. Coupa initially provided a spend analysis tool to mid-sized companies. It then went on to expanding with the Coupa Inventory and Coupa Pay service into supply chain and inventory management and to support all corporate treasury activities related to payments (e.g. expenses and supplier invoices). This is a simplistic description of what is otherwise a very articulated set of complementary solutions for corporate treasurers.

To give an overview of the breadth of Coupa's ecosystem, **Fig. 8** shows the different elements and services offered to business customers (buyers) as well as to the supplier/provider side of the Coupa marketplace platform (top right). Coupa services are illustrated at the centre of the diagram.<sup>9</sup>

Four of these (Compliance and Contract Management, Coupa Pay, Spend Analysis and Spend Guard and Community Intelligence) provide a wrapper through which the cluster of services from Core Partners. Complementors are integrated to the overall ecosystem value proposition.

<sup>8</sup> <https://www.coupa.com/>

<sup>9</sup> Please refer to the Appendix A for the description of Coupa's own services.

## What we want to do?



### Unique Value Proposition

What is the customer journey that you want to capture?



**Cloud-based BSM platform** providing services such as procurement, supplier-, invoice-, expense-, and supply chain management to med- to large size businesses and connecting them to network of suppliers (e-procurement/B2B marketplace).

Value-add through data analysis of each customer's data and across customers ("community intelligence"); providing tools to analyse performance and model/predict/improve e.g. demand.



### Competitors

Ecosystems (or platforms) that provide similar value proposition Standalone (non-platform) offerings that provide similar value proposition

### Tradeshift

**Tradeshift:** AP automation, procurement & working capital solution.



**Basware:** Purchase-to-pay & e-invoicing, etc. solution; compatible with different ERP systems; also for smaller businesses.



**SAP Ariba:** Cloud-based platform connecting businesses and suppliers; only offers SAP (ERP) integration.



### Monetisation strategies

Advertising, freemium, cross-selling, data analytics, transaction fees, payment services, etc.

Licensing of platform access for customers (buyer-side) with varying prices depending on the number of elements/services included.

Different pricings for suppliers for the marketplace depending on service range and special packages for technology partners developing apps/features for and based on the Coupa platform APIs.

## Orchestrator



Owns unique value proposition for the customer



**Coupa** orchestrates partners of its platform-based ecosystem; complementing own offerings e.g. through API integration of external software vendors or technology partners.

## Core Partner(s)



Provide the core customer base or complementary offerings needed to create value around unique value proposition



**Payment partners:** CoupaPay services to automate/streamline payments provided by multiple virtual card and technology partners.

## Technology Enabler



Supports technological operations of the ecosystem



**Managed services:** Selected partners providing important elements of the service e.g. supply chain modelling, expense mgmt. etc.

## Complementors



Enrich the customer value proposition, yet individually they are not critical for this value proposition to materialise



**Supplier network:** supplier side of the platform e.g. manufacturers (7 million).

**Application integration & mgmt.:** Companies helping companies who want to/are already using Coupa.



**Resellers** Provide the ecosystem's offerings as part of their own product or service



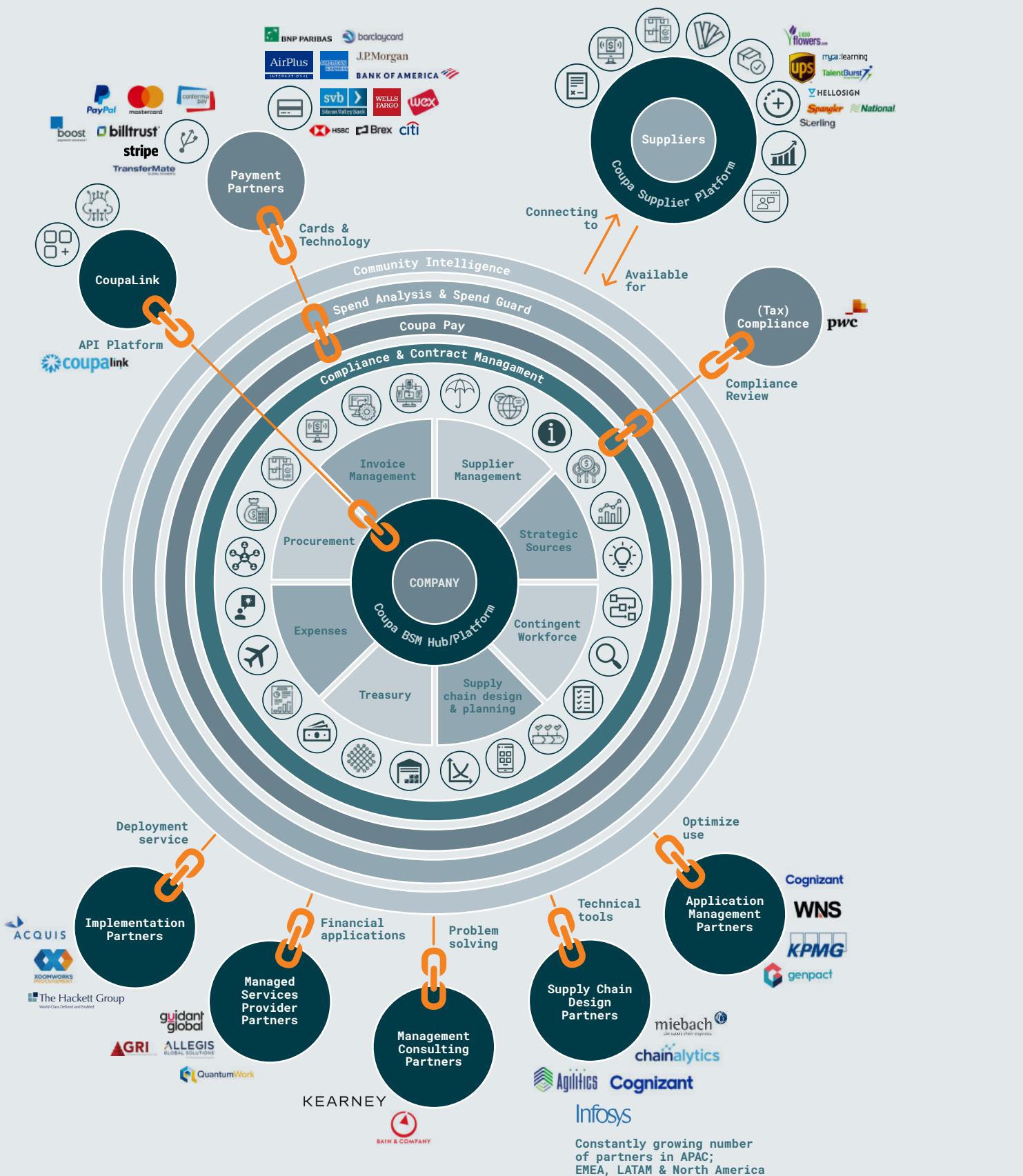
Coupa is mainly selling their own, but deals (e.g. Oracle's NetSuite) enable joint marketing with a focus on software compatible / integrated with Coupa.

## Who is needed to make it happen?

Ecosystem Canvas Model © Andrew Shipilov and Francesco Burelli, 2021.

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Mapping of Coupa's business model by Arkwright analysis.



**Fig. 8 – Coupa's Business Spend Management Platform-Based Ecosystem.**

The diagram in [Fig. 9](#) shows the extent of services integrated within Coupa's value proposition.

Importantly, all of the firms participating in the ecosystem benefit from their mutual participation: consulting firms or supply chain management providers (Coupa partners) offer their own clients to help them efficiently integrate. Meanwhile, suppliers on the Coupa platform and third-party developers get access to the large Coupa customer base to sell their products and services. Coupa licenses its platform not only to the buyer-side but is also starting to offer paid support to Coupa Partners and suppliers for a seat at the table. An elaborate list of the different services, as well as an explanation of the different parts, can be found in the Appendix.

The circles in the middle of the Coupa ecosystem show the different services Coupa offers to its business clients, including Procurement Services (Open Buy, Budget, Inventory Management) or Invoice Management (E-Invoicing, Invoicing Automation, InvoiceSmash). The outer layers represent the overarching services needed to facilitate the others like Coupa Pay or Community Intelligence.

On the perimeter you can find the added services that are either supported by external providers (Coupa Pay) or are more distantly related to the main offering (Coupa Link). In these cases, Coupa benefits from the expertise of other providers to enrich their products e.g. partnering with American Express Global Business Travel to create the Coupa Travel Saver', which tracks prices for airline and hotels.

Today, Coupa states it has more than 2,000 customers in more than 100 countries e.g. including Nike, Slack, Amazon and Coca-Cola.

COUPA'S VALUE PROPOSITION DEVELOPED OVER TIME STARTING FROM ITS INCEPTION IN 2006. ITS CAPABILITIES AND FUNCTIONALITIES EXPANDED OVER SEVERAL YEARS THROUGH ACQUISITIONS AND THE DEVELOPMENT OF RELATIONSHIPS WITH CORE PARTNERS

To bind both sides of their procurement platform (buyers and suppliers) to the ecosystem, Coupa has also started to create a connected second solution cluster that is dedicated to suppliers. Besides access to the large buyer network, suppliers can also benefit from e-invoicing, contract management, catalogue management and shipment tracking for all transactions and orders processed via the platform.

This value proposition developed over time starting from its inception in 2006. Its evolution is mapped in Fig. 9 through the Ecosystem Canvas Timeline<sup>10</sup> framework.

Coupa is the orchestrator of its own B2B PBE as well as contributing a range of proprietary capabilities and functionalities. These expanded over several years through acquisitions (e.g. ZenPurchase, InvoiceSmash and TripScanner in 2015) as well as through the development of relationships with core partners (e.g. Mastercard in 2015, HSBC for Coupa Pay in 2021, etc.).

While Coupa has always been open for third-party developers to develop new features and add-ons to the Coupa platform, the focus has been on a systematic expansion of capabilities. With efficiency gains at the centre of BSM platform implementation, Coupa has also expanded into working capital financing solutions to further facilitate the transactions on the platform. Those services can encompass seller-initiated options like factoring, invoice discounting and early payment programs, or buyer-initiated options like approved payables financing. This creates a three-way-network between buyers, suppliers, and funders, which strengthens the overall value of the ecosystem.

<sup>10</sup> Andrew Shipilov and Francesco Burelli, "A Simple Guide to Charting the Evolution of an Ecosystem", INSEAD Knowledge, 2022. <https://knowledge.insead.edu/blog/insead-blog/a-simple-guide-to-charting-the-evolution-of-an-ecosystem-18081>

TIMELINE	2009	2011	2014	2015	2016	2020	2021	2022			
<b>Unique Value Proposition</b>		Launch of Coupa Spend Optimizer	Extension to Coupa Inventory	<b>Step by step extension of services through partnerships &amp; acquisitions</b>			Launch of Coupa Ventures & Coupa App Marketplace	Edded Environmental impact analysis tool			
				<i>Expanding in business management ecosystem</i>			Coupa Pay Launch 2018				
<b>Competitors</b>	basware	<i>Carried forward</i>									
	SAP Ariba	<i>Carried forward</i>									
	↑ ↑ Tradeshift	<i>Carried forward</i>									
<b>Monetisation Strategies</b>	Monthly payments by:						<i>Direct marketplace suppliers or other suppliers (e.g. Coupa partners developing new features/apps based on APIs)</i>				
		<i>Clients (companies)</i>									
<b>Orchestrator</b>		<b>Coupa</b>									
<b>Core Partner(s)</b>				mastercard svb Silicon Valley Bank			<i>Coupa Pay partners: Virtual card &amp; Payment technology</i>				
					citi WELLS FARGO AMERICAN EXPRESS		billtrust HSBC Brex AirPlus INTERAC				
<b>Technology Enabler</b>		<b>Coupa</b>									
				Acquisitions: ZenPurchase, InvoiceSmash & TripScanner	Acquisition: Contractually (contract mgmt)	Acquisition: Llamasoft (AI supply chain design)					
				ZenPurchase INVOICE SMASH TripScanner Business Travel Made Easy	Contractually	Llamasoft	<i>+ Supplier network: Provider of additional services &amp; goods for the Coupa Marketplace</i>				
<b>Complementors</b>							<i>+ Business partners e.g. consulting firms</i>				
<b>Resellers</b>			Jointly market products NETSUITE		ORACLE						
			Pre-Oracle deal			Oracle acquires NetSuite					

Ecosystem Canvas Timeline © Andrew Shipilov and Francesco Burelli, 2022.

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Mapping of Coupa's business model evolution by Arkwright analysis.

# PLATFORM BASED ECOSYSTEM EVOLUTIONARY EXCEPTIONS (TRADELENS EXAMPLE)

THERE CAN BE MULTIPLE SHIFTS IN THE UNIQUE VALUE PROPOSITION, COMPETITORS, MONETIZATION STRATEGIES OR OTHER ASPECTS OF ECOSYSTEMS AND PLATFORMS AS THESE EVOLVE OVER-TIME

As outlined in a thought leadership reference analysis,<sup>11</sup> there can be multiple shifts in the unique value proposition, competitors, monetization strategies or other aspects of ecosystems and platforms as these evolve overtime. Most of them start by providing one step of a customer journey or value chain, often through a platform value proposition, and then expand to other adjacent services. This evolutionary model has rare exceptions of value propositions that start off as fully-fledged ecosystems.

This is the case of TradeLens. The “industry-supported supply-chain data, document, and analytics platform for importers, exporters, 3PLs and every other party involved in global trade”<sup>12</sup> was created out of an initial collaboration between IBM and Maersk to accelerate supply chain digitization in 2017.

Global import and export supply chains are known for their complexity. Hundreds of parties are involved in moving products from one location to another with documentary exchanges and a set of administrative and financial activities taking place at each handover. From the outset, TradeLens already had 92 participants (including harbour authorities and logistics companies) when it launched in 2018 with the goal of building a unifying platform-based ecosystem to facilitate end-to-end logistic supply chains. The network of TradeLens’s ecosystem participants acts both as customers and providers to the platform, allowing end-to-end paperless supply chain management transactions with every step being tracked though a blockchain-based platform.

**Fig. 10** provides an illustration of a set of supply chain steps that are enabled through TradeLens’ PBE in which TradeLens enables an end-to-end customer journey in which the ‘customer’ is typically a cargo container.

<sup>11</sup> <https://knowledge.insead.edu/blog/insead-blog/a-simple-guide-to-charting-the-evolution-of-an-ecosystem-18081>

<sup>12</sup> <https://www.tradelens.com/>

**Fig. 10 – Illustration of a supply chain example enabled by TradeLens: flowers from Kenya to Rotterdam.**

TradeLens aims not only to reduce supply chain complexity but also claims to offer significantly higher transparency for all parties involved. An IBM and Maersk presentation in 2017 already showed that the system aimed to tackle the problem of organizational silos, high compliance costs and fraud potential, especially at the point of customs clearance.<sup>13</sup> The goal is to enable a “consistent view of [the] supply chain independent of who [the] supplier is” with “anybody who is party to the transaction [able to see] the information” in real-time. Basically, it is an ecosystem that brings together the whole import/export ecosystem.

ALL INTERACTIONS LOGGED ON THE TRADELENS' PLATFORM										
SUPPLY CHAIN STEPS										
DESCRIPTION	Kenyan farm submits packing list that becomes available to all participants	During transport to the port, three agencies provide their necessary signatures	Real-time updates, shipment is quickly approved, issue of e-bill of lading	Problem at the port and update are automatically communicated to all participants	Container is loaded on the cargo ship; status/ownership continuously updated	Flowers shipped to Rotterdam	Container unloaded at the port in Rotterdam, location is updated	Customs' approval sped up with all necessary documents in one place	Coordinated, timely pickup of the flowers by the trucker	Delivery and arrival of flowers tracked on the platform in real-time
EXAMPLES OF INVOLVED PLAYERS	  	 		 	  	 	 			

<sup>13</sup> <https://www.youtube.com/watch?v=tdhpYQCWnCw>

**What we want to do?**



### Unique Value Proposition

What is the customer journey that you want to capture?

### TRADELENS

**Supply-chain ecosystem** based on **blockchain** technology providing **secured real-time transmission of data** to parties involved in a shipment/cross-border trade. Companies/authorities along the supply-chain can **submit and access digital information** about the current status of the goods significantly decreasing number of necessary (paperwork) steps in the communication.

**Network effect:** Increased value for each user with each company joining – covering key locations and supply-chain steps.



### Competitors

Ecosystems (or platforms) that provide similar value proposition Standalone (non-platform) offerings that provide similar value proposition

### PartnerLInQ

**PartnerLInQ:** Digital logistics platform for businesses to integrate and interconnect their 3PL services.

### ORACLE

**Oracle Global Trade Management Cloud:** service including trade compliance, customs mgmt., trade agreements and overall control over orders.

### GSBN

**GSBN:** Details to be announced; digitizing trade based on blockchain technology and an open network (platform).

### MINEHUB

**MineHub:** Digital supply chain platform, offering integrated supply chain workflows.



### Monetisation strategies

Advertising, freemium, cross-selling, data analytics, transaction fees, payment services, etc.

Although TradeLens was developed as an **open platform** and can be accessed using “**publicly available APIs**”, users pay a monthly **subscription-fee** after a free trial of 30 days.

Both Maersk and IBM are using it for **marketing purposes**.



Owns unique value proposition for the customer

### IBM MAERSK

The TradeLens ecosystem is orchestrated by its two **co-developers** IBM & Maersk with IBM providing the basis with its **blockchain technology**. They attract new firms to the **supply-chain** ecosystem who are both **users and complementors**.

### Core Partner(s)

Provide the core customer base or complementary offerings needed to create value around unique value proposition

### IBM MAERSK

Apart from IBM & Maersk, it is essential for the value of the ecosystem to have **partners in each step of the supply-chain** (e.g. port & export authority, customs, cargo owners) in multiple **key trading locations** (e.g. US, China).

### Technology Enabler

Supports technological operations of the ecosystem

### IBM GTD

Ecosystem is based on IBM's **blockchain technology** providing the main services (secure, forgery-proof data exchange); TradeLens platform jointly developed with **GTD solution** (division of Maersk).

### Complementors

Enrich the customer value proposition, yet individually they are not critical for this value proposition to materialise



All **participating companies** and authorities are both **users and more or less exchangeable complementors** of the ecosystem.

### Resellers

Provide the ecosystem's offerings as part of their own product or service

Currently **no resellers** apart from participating firms possibly using their participation as a **selling-point** to their respective customers.

**Who is needed to make it happen?**

Fig. 11 – TradeLens' Ecosystem Canvas.

**Fig. 11** provides an illustration of TradeLens' PBE through the application of the Ecosystem Canvas framework. IBM and Maersk are the orchestrators, and at the same time they are core partners with any participating organization, e.g. a port authority or other shipping companies, whose participation adds on to critical mass of adoption, industry and geographical reach. IBM and GTD Solutions, a division of Maersk, are the technology enablers to an ecosystem that benefits from a significant number of complementing companies with their participation throughout the value chain.

It is worth noting that, even though TradeLens had started off as an ecosystem, this does not mean that it cannot continue to expand and improve its services. New partners are continuously added to the platform (e.g. international ports, logistics providers, freight forwarders) and new or improved services are added. In October 2021, for example, MonetaGo announced its partnership with IBM with the goal of integrating its blockchain anti-fraud solution with TradeLens.<sup>14</sup>

<sup>14</sup> <https://www.ledgerinsights.com/tradelens-we-trade-to-integrate-anti-fraud-trade-finance-blockchain-monetago/>

# CONCLUSION

This report builds upon and expands on the analysis of the previous Arkwright publication on these business models, which contains references about business model definitions and the evolutionary path leading from linear business models, to platforms, to PBEs. This analysis highlights that, while PBEs are commonly associated with super-apps and retail value propositions, PBE business models are applicable, and hold significant value potential, within B2B industries as well.

PBEs are highly-evolutionary business models. Most evolve from earlier platform-based value propositions, although there are exceptions that are being developed and launched as PBE business models from the outset, such as TradeLens. PBEs benefit from an enhanced visibility about the range of transactions that are taking place within a customer journey and, as such, keep evolving by attracting complementary solutions and further enriching the PBE value proposition through organic and inorganic expansion from the side of the companies orchestrating the business model.

Their evolution can be mapped and designed through evolutionary planning that can identify paths of expansion and development. Frameworks, such as the Ecosystem Canvas and the Ecosystem Timeline Canvas, provide retail- and business-focused companies with the needed logical structure to evaluate development options, once a target customer journey has been identified. Opportunities would depend on the initial business focus and might start from a targeted service that is then expanded to adjacent and complementary products, though, platform-enabled, strategic partnerships.

Apart from the obvious difference in target groups of B2C vs B2B ecosystems, the illustrated examples show that the building blocks, advantages and challenges of ecosystems are transferable across industries, target groups and customer journeys.



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# APPENDIX A

## DESCRIPTION OF COUPA'S VALUE PROPOSITIONS

### Services in the Coupa Platform-based Ecosystem (1/2)

SERVICES FOR CUSTOMERS	DESCRIPTION	
 OPEN BUY	<ul style="list-style-type: none"> <li>Centralized platform to connect customers with suppliers; consolidates all the available offers</li> </ul>	PROCUREMENT
 BUDGET	<ul style="list-style-type: none"> <li>Possibility to track current spending and set limits; track which transactions have been approved and which are still pending</li> </ul>	
 INVENTORY MANAGEMENT	<ul style="list-style-type: none"> <li>Dashboard shows current inventory availability based on (upcoming) deliveries – Automated suggestions when stocks are running low</li> </ul>	
 E-INVOICING	<ul style="list-style-type: none"> <li>Turn purchase orders into electronic invoices and send them to suppliers on the platform</li> </ul>	
 INVOICING AUTOMATION	<ul style="list-style-type: none"> <li>Based on outstanding purchase orders and spending limits “matching” bills are paid automatically; approval only needed for exceptions</li> </ul>	
 INVOICE SMASH	<ul style="list-style-type: none"> <li>Automated data extraction to e.g. turn e-mails into invoices</li> </ul>	
 3RD PARTY RISK MGMT.	<ul style="list-style-type: none"> <li>Risk assessment questionnaire and constantly updated risk estimations based on other transactions of the supplier with other customers</li> </ul>	
 SUPPLIER SUCCESS	<ul style="list-style-type: none"> <li>Possibility to connect with suppliers via email, automated supplier notifications; let suppliers see updates on approvals/payment status</li> </ul>	
 SUPPLIER INFORMATION	<ul style="list-style-type: none"> <li>Customers can decide which information is required from suppliers to enter bids (e.g. specific information about CSR requirements)</li> </ul>	
 SOURCING MANAGEMENT	<ul style="list-style-type: none"> <li>Customer company can set up sourcing events to collect supplier bids</li> </ul>	
 SOURCING ANALYTICS	<ul style="list-style-type: none"> <li>Combined with supplier information gives insight e.g. into performance of suppliers when working with other customers</li> </ul>	
 AUTOMATIC SUGGESTIONS	<ul style="list-style-type: none"> <li>Based on previous orders or existing contracts (e.g. nearing expiration) get suggestions for next sourcing or better suppliers of the same products</li> </ul>	STRAT. SOURCING

	SERVICES FOR CUSTOMERS	DESCRIPTION
WORKFORCE	 GUIDED WORKFLOW	<ul style="list-style-type: none"> <li>Workflow for existing and new employees to be efficiently onboarded on new tasks based on the most important steps involved</li> </ul>
	 MONITORING	<ul style="list-style-type: none"> <li>Monitoring performance of workforce but also sourcing rates at the same time</li> </ul>
	 COMPLIANCE	<ul style="list-style-type: none"> <li>Reduce compliance risk (e.g. labour laws); also connected to overall contract and compliance management on the platform</li> </ul>
SUPPLY CHAIN	 SUPPLY CHAIN MODELER	<ul style="list-style-type: none"> <li>Enables customer to model their supply chain and run design scenarios (e.g. to identify vulnerabilities) based on provided templates</li> </ul>
	 APP STUDIO	<ul style="list-style-type: none"> <li>Tool to help customers develop new apps e.g. to share information among relevant stakeholders</li> </ul>
	 DEMAND MODELER	<ul style="list-style-type: none"> <li>Tool with machine learning capabilities to model different scenarios and predict demand mid- to long-term</li> </ul>
TREASURY	 CONTROL CENTER	<ul style="list-style-type: none"> <li>Helps customers oversee and manage finances, e.g. long- and short-term instruments; involves in-house bank and counterparties</li> </ul>
	 MULTILATERAL NETTING	<ul style="list-style-type: none"> <li>Have overview over intercompany invoices; tool to optimize internal financing and cash allocation</li> </ul>
	 CASH FLOW FORECASTING	<ul style="list-style-type: none"> <li>Connected to multilateral netting to forecast intercompany cash flow</li> </ul>
EXPENSES	 REPORTING & INSIGHTS	<ul style="list-style-type: none"> <li>Connected to "Community Intelligence" – collecting and comparing expense spending across companies; identify savings opportunities</li> </ul>
	 TRAVEL SAVER	<ul style="list-style-type: none"> <li>Tracking prices for airlines and hotels to capture potential savings for business trips; takes into account negotiated rates, travel price assurance</li> </ul>
	 SMARTER TRIP	<ul style="list-style-type: none"> <li>Connects platform to mobile app used to track expenses as they occur e.g. by tracking transports and receipts; automate expense reports</li> </ul>

## Services in the Coupa Platform-based Ecosystem (2/2)

WRAPPER SERVICES	DESCRIPTION
 COMPLIANCE	<ul style="list-style-type: none"> <li>Compliance review (legislative) provided by PwC; Contract management on the platform for existing and new contracts e.g. with suppliers</li> </ul>
 COUPA PAY	<ul style="list-style-type: none"> <li>Connected with bank/tech partners to reconcile payments: suppliers, employees, subsidiaries, etc.; domestic/cross-border/digital wallet/...</li> </ul>
 SPEND ANALYSIS	<ul style="list-style-type: none"> <li>Advanced analytics for all types of business spend; integrated Spend Guard to set and monitor budgets; Spend Insights from Community Intelligence</li> </ul>
 COMMUNITY INTELLIGENCE	<ul style="list-style-type: none"> <li>Data from all Coupa customers collected and compared to suggest improvement (areas), provide insights on suppliers, risk management, etc.</li> </ul>
PAYMENT SERVICES	DESCRIPTION
 VIRTUAL CARD PARTNERS	<ul style="list-style-type: none"> <li>Partners supporting Coupa Pay virtual card function for online purchases; e.g. American Express, Bank of America</li> </ul>
 PAYMENT TECHNOLOGY	<ul style="list-style-type: none"> <li>Technology partners supporting Coupa Pay services (e.g. cross border payments); e.g. Conferma Pay, PayPal, Stripe</li> </ul>
EXTERNAL INTEGRATIONS	DESCRIPTION
 COUPALINK (1)	<ul style="list-style-type: none"> <li>API-based open integration platform to allow vendors to integrate their products (e.g. tax engines); partners join the "open platform community"</li> </ul>
 COUPALINK (2)	<ul style="list-style-type: none"> <li>CoupaLink also allows external services to develop joint solutions – potentially invited to build a panel app to be added to the platform</li> </ul>

SUPPLIER SERVICES	DESCRIPTION
 CONTRACT	<ul style="list-style-type: none"> <li>Coupa customers have access to contract templates/management which also especially facilitates contracts with suppliers</li> </ul>
 E-INVOICING	<ul style="list-style-type: none"> <li>Instant validation of payments and possibility to send invoices in paper/digital version as they can be directly transferred</li> </ul>
 INVENTORY MANAGEMENT	<ul style="list-style-type: none"> <li>Track sales through Coupa to manage inventory and get necessary reminders; directly linked to supplier information provided to customers</li> </ul>
 CATALOGUES	<ul style="list-style-type: none"> <li>Catalogue management solution to simplify ordering process; hosted or punchout catalogues (integrated external link to online shop)</li> </ul>
 SHIPMENT TRACKING	<ul style="list-style-type: none"> <li>Follow packages sent to Coupa customers</li> </ul>
 BENEFITS / PERKS	<ul style="list-style-type: none"> <li>Provided through partnerships with firms like UPS, Hellosign, etc. to get discounts for relevant B2B services</li> </ul>
 BUSINESS PERFORMANCE	<ul style="list-style-type: none"> <li>Provides insights into transactions with Coupa customers; shows order trends to predict demand</li> </ul>
 BLOG	<ul style="list-style-type: none"> <li>Source of information for suppliers on Coupa to help with the integration of the platform but also other business challenges</li> </ul>

# ARKWRIGHT PROFILE

WE BELIEVE  
IN PRAGMATISM,  
METICULOUSNESS  
AND IN DEEP  
KNOWLEDGE OF  
THE INDUSTRIES  
IN WHICH WE  
OPERATE

Arkwright is a management consulting firm offering strategy advisory services to private corporations, NGOs, investors and start-up companies. Amongst a number of different industry-dedicated teams, our Digital, Payments and Digital Banking practice is one of the most experienced globally, positioning Arkwright as a high-end digital financial services and payments specialist strategy boutique.

With clients that include major financial institutions, central banks, technology providers and institutional investors as well as internet market places and media organisations, Arkwright has hands-on experience in leading and supporting the development of digital strategies and digital transformation.

Our knowledge of global cases and best practices, proprietary ideation methodologies and the hands-on experience of our management consultants and industry experts is able to support throughout the strategy and implementation phases.

We believe in pragmatism, meticulousness and in deep knowledge of the industries in which we operate. At the heart of our mission is the development and implementation of enduring performance improvements and growth strategies, in partnership with our clients.

When we founded Arkwright in 1987, we did so with a strong belief that clients' sustained success requires deeper collaboration and a different working model than what we experienced at the time. Since then, our focus on deep-rooted, long-term partnerships with selective clients has formed the basis of our approach and helped us grow to what we are today: an international consultancy with Nordic roots, operating truly globally, from our offices in Hamburg, Oslo and Stockholm and with additional operational presence based in the Middle East and the US.

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