Create Enterprise Marketplaces to Accelerate Digital Business

Published: 5 July 2019 ID: G00386889

Analyst(s): Sandy Shen, Jason Daigler

Organizations create enterprise marketplaces to allow third parties to sell through the platform to enrich offerings and stimulate growth. Application leaders for digital commerce technologies can use enterprise marketplaces to deliver various benefits to their digital business endeavors.

Key Challenges

- Digital commerce organizations aiming to improve customer experience or operational efficiency find they cannot achieve these objectives on their own, and have to involve a range of partners to improve transparency and bring new capabilities.
- Digital commerce organizations have been traditionally involved in linear selling relations with the customer, and need ideas to scale the business using the platform business model that engages with more partners.
- Digital commerce organizations face challenges in developing new capabilities on the technical and operational sides to ensure a successful launch of new product offerings or business models.

Recommendations

For application leaders responsible for digital commerce technologies:

- Understand your organization's digital ambition, and work with business leaders to identify the benefits that enterprise marketplace bring to your digital business endeavors. These include improving efficiency/lowering costs, growing the business, and/or improving the experience for customers and partners.
- Develop a strategy to evolve enterprise marketplaces by including new capabilities, service offerings and types of partners to engage.
- Work with business leaders to source the right launch partners, define the revenue model and operational processes, and provide technical tools, education and training to partners and customers.

Table of Contents

Strategic Planning Assumptions	2
Introduction	3
What Are Online Marketplaces and Enterprise Marketplaces?	Э
Why Create an Enterprise Marketplace?	4
Analysis	5
Define Your Motivations and Benefits of Creating the Enterprise Marketplace	5
Improve Efficiency and Lower Costs	6
Grow the Business	8
Improve Customer and Partner Experience	g
Develop A Strategy to Evolve Your Marketplace	11
Ensure A Strong Start for the Enterprise Marketplace	12
Technology Solution	12
Partner Sourcing	12
Revenue Model	13
Operational Processes	13
Partner and Customer Communication and Education	14
Gartner Recommended Reading	14
List of Tables	
Table 1. Examples for Improving Efficiency and Lowering Costs	7
Table 2. Examples for Growing the Business	8
Table 3. Examples of Improving Customers and Partner Experience	1C
List of Figures	
Figure 1. Online Marketplaces	3
Figure 2. Online Marketplace Segments, Roles and Responsibilities	4
Figure 3. Enterprise Marketplace Motivations and Benefits for the Operator	6

Strategic Planning Assumptions

By 2023, 15% of medium- to high-gross-merchandise-value digital commerce organizations will have deployed their own marketplaces, thereby creating an entirely new digital ecosystem.

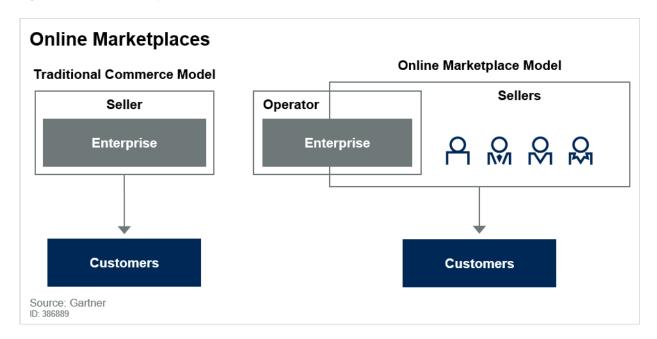
By 2023, at least 70% of the enterprise marketplaces launched will serve B2B transactions.

Introduction

What Are Online Marketplaces and Enterprise Marketplaces?

Online marketplaces are digital platforms that host product offerings from multiple sellers. This has evolved from the traditional commerce model in which the commerce organization is the only seller to the commerce organization assuming the role of marketplace operator (see Figure 1). The operator can sell its own products and services, along with those of third parties, or can purely function as the operator.

Figure 1. Online Marketplaces



Marketplace operators manage seller onboarding, product listing, fund collection and disbursement, and provide the necessary tools so sellers can manage their stores, customers, orders and financials. The degree to which sellers can manage their listings varies depending on the marketplaces. It can range from zero management, where the marketplace operator sells on behalf of the seller via a distribution arrangement, to full management, where sellers manage the entire store operation that covers both the technical and operational aspects. Amazon, Walmart and JD.com have a big portion of their sales via the distribution arrangement, and Tmall and eBay are examples where sellers manage all their store operations.

Enterprise marketplaces are a subset of online marketplaces, and are operated by organizations that have mostly operated in the analog mode and now are exploring opportunities to become

Gartner, Inc. | G00386889 Page 3 of 16

digital business. They are different from third-party marketplaces such as Amazon, eBay and Tmall, which were created by digital-native companies to facilitate commerce transactions from the start (see Figure 2). Enterprise marketplaces often see the sponsoring organization sell their own products and services alongside those of third parties, and can evolve to include a bigger portion of third-party offerings over time.

Figure 2. Online Marketplace Segments, Roles and Responsibilities

Online Marketplace Segments, Roles and Responsibilities Operator Seller Online Marketplaces · Seller onboarding and · Product and pricing management · Marketing and promotions Product listing Customer acquisition · Rules and processes and engagement **Enterprise** · Fund collection and · Customer service Third-Party distribution Marketplace Inventory management Marketplace (e.g. Walmart, · Order management Order management (e.g. Amazon, Alstom, State of Payment eBay, Tmall) Pick, pack and ship Texas) Fulfillment and logistics · Storefront design and Financial management maintenance · Reporting and analysis · Back-end integration · Value-added services · Financial management Source: Gartner ID: 386889

Why Create an Enterprise Marketplace?

Digital business involves using digital technologies to enable new business models that otherwise would not exist without digital technology and information (see "Four Definitions Make a Digital Business Strategy Process More Effective"). The enterprise marketplace is a new business model in which organizations change their ways of doing business, create wider ecosystems, develop new capabilities, and generate new sources of revenue. It is one of the six digital commerce business models we identified in "Scaling Digital Commerce Into a Digital Platform Business."

- New ways of doing business: Organizations are not only selling directly to customers but also facilitating transactions between third-party sellers and customers. Third-party sellers will contribute to an increasing portion of the products and services sold through the platform as the marketplace grows. This has implications for the business model and operating model since the organization is now running a platform business model where it facilitates transactions of third parties. It also needs to change the operating model so it can recruit and engage partners, and manage the operations of the marketplace. Examples include Walmart Marketplace, Best Buy Canada, H&M (Afound).
- Wider ecosystem: The traditional commerce ecosystem includes upstream suppliers and downstream distributors and customers. Enterprise marketplaces can bring new participants beyond the traditional value chain such as technology vendors, developers, financial services

Page 4 of 16 Gartner, Inc. | G00386889

providers and even competitors. This allows the organization to evolve to a broader platform business where the enterprise marketplace is an enabling component. Examples include DNV GL (Veracity), Frankfort Airport (shopping) and Volkswagen (RIO).

- New capabilities: At the basic level, organizations need to set up the technology platform to connect sellers and customers, and give them tools to enable transactions and manage the business. This can be more complex than the traditional direct commerce model, because it involves managing multiple sellers that have their own products and pricing. In addition, organizations need to develop new operational capabilities, such as sourcing new partners to join the platform, and increase usage and transaction volume by improving service levels and technical capabilities. Furthermore, they need to develop new offerings to continuously increase the value of the platform to improve participant satisfaction and loyalty. Examples include Sourceability (Sourcengine), Alstom (StationOne) and the State of Texas (Texas SmartBuy).
- New sources of revenue: Organizations will generate new revenue from the marketplace, which can include commissions, service fees, advertising, technical service, logistics and payment processing.

This research looks at the different motivations and benefits of enterprise marketplaces, and advises application leaders on how to use the marketplace model to address business challenges, pursue new opportunities and ensure a strong start of the initiative.

Analysis

Define Your Motivations and Benefits of Creating the Enterprise Marketplace

Organizations create enterprise marketplaces out of various motivations with a range of benefits. Application leaders should work with business users to understand the problems they face, and advise on how enterprise marketplace can be tapped. We have identified three major motivations of launching an enterprise marketplace and the benefits they deliver to the operator (see Figure 3).

Gartner, Inc. | G00386889 Page 5 of 16

Figure 3. Enterprise Marketplace Motivations and Benefits for the Operator

Efficiency & Costs	Grow the Business	Improve Experience
Streamline Buying Processes	Enrich Product Offerings	Enhance Partner/Customer Engagement
Control Procurement Processes/Costs	Leverage Core Assets	Develop New Offerings/Capabilities
	Access New Channels	

Improve Efficiency and Lower Costs

Many organizations, especially those in the B2B sector, face the challenge of inefficient and complex buying/selling processes. Orders are not only being processed in a manual fashion via sales visits, phone calls, fax and email, but also can be complex. They can include several hundreds or thousands of items from various suppliers with different lead times and delivery methods. Furthermore, the supply chain information isn't always transparent, such that buyers don't know where all the suppliers are or who offers the best products and services, and don't have the negotiating power to get the best deal. Enterprise marketplaces have buyers meet the suppliers on the same platform, and make the information more transparent, thus improving efficiency and lowering costs for purchasing. Table 1 lists some organizations that use marketplace to address this problem.

Page 6 of 16 Gartner, Inc. | G00386889

Table 1. Examples for Improving Efficiency and Lowering Costs

Vertical	Examples
Manufacturing	Sourceability (Sourcengine) Siemens Mobility (Easy Spares) Alstom (StationOne)
Life Science	Merck (Sigma-Aldrich)
Hospitality	AccorHotels
Government	State of Texas (TxSmartBuy)

Source: Gartner (July 2019)

Streamline Buying/Selling Processes

Manufacturing is a major sector that can benefits from enterprise marketplace, given the large number of suppliers and customers they often deal with.

- Sourceability set up Sourcengine to help OEMs get quotes in a few seconds rather than in weeks or months. The company offers distribution services to help OEMs find the right supplier with the right products. The process used to be very cumbersome, as some Bill of Materials (BOM) can include thousands of items. To find the supplier for each item and get the product specification, lead time and commercial information can take weeks or months. Sourengine connects about 1,700 suppliers worldwide with OEMs, provides BOM tools for OEMs to load their requirements, and gets quote in a few seconds for the entire BOM that meets the technical and commercial requirements.¹
- Alstom, a manufacturer of transportation systems, launched StationOne marketplace to connect rail operations and suppliers from across the world to ease the buying process for rail system parts.²

Control Procurement Processes and Costs

Organizations with a large number of members, subsidiaries and partners can streamline the procurement process, and ensure compliance and cost savings for buyers.

- AccorHotels uses an enterprise marketplace to connect suppliers with subsidiaries, franchisees and various buying entities so they can comply with the procurement processes, and reduce procurement costs and leakage to noncontracted vendors.
- **The State of Texas's** Procurement Division launched Texas SmartBuy, a procurement marketplace to connect thousands of local government, agencies and districts with suppliers to give them access to statewide contracts and to ensure compliance in procurement.³

Gartner, Inc. | G00386889 Page 7 of 16

Grow the Business

A key motivation to do digital business is to achieve growth. Enterprise marketplaces help achieve the objective by connecting with more partners to enrich product offerings, connecting physical assets to the digital platform to create new value, and giving access to new channels. Table 2 lists some organizations that used enterprise marketplaces to grow their business.

Table 2. Examples for Growing the Business

Verticals	Examples
Retail	Walmart Marketplace, Best Buy Canada, H&M (Afound), ePrice, Conforama
Real Estate	Simon Property Group (premiumeoutlets)
Services	DNV GL (Veracity)
Banking	ICBC (marketplace), CCB (B2C marketplace, B2B marketplace)
Agriproduct	COFCO (womai)

Source: Gartner (July 2019)

Enrich Product Offerings

This is the most common way that enterprise marketplaces help grow the business. Organizations seek third parties that have complementary offerings to their product portfolio so they can quickly increase the assortment and selections for customers. Retailers such as Walmart, Best Buy Canada and H&M have used enterprise marketplaces to enrich their product offerings to quickly increase assortments.

- Best Buy Canada increased the assortment by 200% in the first year and achieved 30% growth in online revenue with the launch of marketplace.⁴
- **ePRICE**, an Italian retailer, saw its product assortment increase by 100% in six months and a 37.5% increase in online sales in the first year as a result of the marketplace.⁵

Leverage Core Assets

Some organizations start by bringing existing assets online to drive incremental sales and traffic. Typical examples are retailers and property owners that already work with a large number of brands and retailers. Enterprise marketplaces help them better serve clients by driving more sales.

■ **H&M** launched Afound as a brand for deep-discount products with apparels and accessories from H&M and partner brands. It has retail stores and the online marketplace. 6

Page 8 of 16 Gartner, Inc. | G00386889

Simon Property Group, a shopping mall owner in North America, launched a marketplace for its Premium Outlets properties to help brands and retailers drive incremental sales and traffic both online and in the store.⁷

Other organizations with massive physical assets started on their digital business journey by connecting existing assets to the digital platform so they can better monitor assets and provide timely services. Examples include industrial manufacturers, logistics providers, fleet operators and transportation providers. While commerce is not a primary purpose when first building the digital platform, adding a marketplace on top brings value to the platform.

DNV GL, a classification and certification provider, already has an ecosystem with a large number of partners in the analog world. Its digital platform, Veracity, allows customers to securely store and share data so they can easily access and better manage the data. Veracity also has an online marketplace where customers can purchase industrial applications, communication solutions and analytics tools to get better insight of the data they uploaded to the platform and achieve better performance of their assets.⁸

On the other hand, organizations starting with a marketplace can also evolve into a wider digital ecosystem in the future where the marketplace is a component (see the Frankfurt Airport example in the Improve Customer and Partner Experience section). The digital ecosystem enables capabilities beyond commerce, such as data storage/exchange, analytics, loyalty management, marketing, advertising and API management. The availability of a marketplace is helpful as it enables transactions when such needs arise.

Access New Channels

Organizations supporting digital commerce, such as those offering payment, credit and logistics services, can use the enterprise marketplace as a new channel to reach new customers.

■ ICBC, the top commercial bank in China, launched online marketplace to offer consumers an alternative place to shop besides third-party marketplaces. It promotes the bank's payment and credit products to consumers, and financing facilities to merchants. The marketplace gives the bank better insight into the order and payment information, which can be used to assist credit decisions. Previously, the bank had to purely rely on its branch offices or go through third parties such as e-commerce platforms and retailers to offer these products, and suffered from limited or low-quality data, despite data being key to making credit decisions.

Some logistics providers have also launched a digital commerce platform and are in the process of launching marketplaces. This not only helps their clients to better sell to end customers, but also allows the organization to better serve digital commerce clients through more visibility into the supply chain and fulfillment, and potentially come up with new offerings.

Improve Customer and Partner Experience

Another key motivation to do digital business is to improve the customer experience. Enterprise marketplaces serve both partners and end customers, whose roles can be interchangeable in some

Gartner, Inc. | G00386889 Page 9 of 16

cases. A better experience helps engage partners and customers, which promotes usage and transaction volume of the marketplace. Table 3 shows examples of organizations that have used an enterprise marketplace to offer a better experience to partners and customers.

Table 3. Examples of Improving Customers and Partner Experience

Verticals	Examples
Aviation	Frankfort Airport (shopping)
Manufacturing	Toyota Material Handling (Toyota Forklifts), Volkswagen (RIO)
High Tech	HP Enterprise (Shop)
Energy	Sinopec (EPEC Global)
Trade	Toy Association (ShopToys365)

Source: Gartner (July 2019)

Engage Customers and Partners

B2B organizations often face the challenge of channel conflict when they launch digital commerce platforms that sell directly to end customers. Some organizations use an enterprise marketplace to address this challenge by enabling channel partners to have their own storefronts and better serve end customers using the platform. This gives the organization more visibility into channel operations, as well as end customers, without disengaging partners. This is often called the B2B2C model.

Toyota Material Handling created a marketplace to allow certified dealers to sell to end customers. This allows them to offer better experience for end customers while engaging its over 200 dealers.⁹

Organizations focusing on end customer engagement can tap into the enterprise marketplace. They may also develop new capabilities when implementing emerging technologies for innovative experience.

• Frankfurt Airport (Fraport) has an online marketplace for duty-free products, managed by brands and retailers. The marketplace is connected to shops and restaurants in the airport to offer passengers a unified commerce experience. Fraport has also developed a membership program where passengers can collect points for their spending, both online and in the store, which can be used to redeem airport services. Fraport has also launched smart billboards using loT technologies to personalize marketing messages as passengers walk throughout the airport (see the case study at the end of "Scaling Digital Commerce Into a Digital Platform Business").

Page 10 of 16 Gartner, Inc. | G00386889

Develop New Offerings/Capabilities

Organizations sometimes choose to develop new offerings to address customer pain points, and new capabilities are often required to support the new offerings. This becomes an obvious choice when organizations try to move to digital business, where digital business technology platform helps them achieve this goal.

- **Volkswagen** launched RIO, an industry platform for the transportation industry. RIO intends to allow logistics providers and fleet operators to better manage their fleet by tracking vehicles, having visibility of the fuel consumption, vehicle conditions and driver behavior, and obtaining accurate maintenance information. Third-party developers can develop solutions such as vehicle tracking, telematics and route planning, and are charged for access to the platform data. The platform intends to address the transportation industry's pain point of increasing efficiency.
 - To support the new platform, Volkswagen needs to develop hardware solutions to retrofit vehicles so field data can be collected, and establish the IoT management platform with analytics tools to offer insight and operational advice to fleet operators. It also needs to develop the marketplace for third-party application listing, purchase and downloads, and needs data management platforms to secure data transmission, storage and exchange.¹⁰
- **Sinopec**, a leading oil and gas company in China, launched EPEC to help other manufacturing organizations address procurement challenges. As an energy business, Sinopec has accumulated a large number of suppliers in the energy industry. Many of these suppliers can serve other manufacturing businesses in areas of material, resources, equipment and chemicals. Sinopec uses the marketplace to connect with suppliers and buying organizations that it otherwise would not work with. It has a supplier sourcing team that actively seeks quality suppliers and manages the curation and onboarding processes. It has a team of procurement managers that work with buyers to offer customized procurement services. ¹¹ The IT team works with large enterprises to integrate the marketplace with e-procurement systems to offer buyers a better experience that complies with the customers' internal policies and processes.

EPEC has expanded beyond China to serve global clients in 104 countries with over 1,200 suppliers and over 10,000 buyers. It is reported to have facilitated sales worth \$17.5 billion as of April 2019. 12

Application leaders should understand the motivations and benefits of enterprise marketplaces, and see which ones match with their organization's digital business ambition and which address the most pertinent business problem. The key is to develop a strong value proposition for partners and customers so they can benefit from the enterprise marketplace model.

Develop A Strategy to Evolve Your Marketplace

The enterprise marketplace is continuously evolving to include more functionality and capabilities to increase the value proposition for partners and customers. Work with business leaders to develop a strategy that can grow the enterprise marketplace to deliver more benefits to the organization and ecosystem partners. Consider which new capabilities, offerings and types of partners you want to bring to the platform and that can enrich the services and grow the dynamics.

Gartner, Inc. | G00386889 Page 11 of 16

- New capabilities and offerings can include product and service bundles, subscriptions, freemium offerings, membership programs, on-demand/real-time services, in-store system integration, IoT integration, advertising/marketing, conversational interfaces, application marketplaces, API management, development frameworks/tools, analytics tools and embedded AI capabilities.
- New types of partners can include organizations offering complementary or substitutive products, logistics providers, payment providers, financial service providers, technology and service providers, third-party developers, industry associations, nonprofit organizations, gig economy contributors, and government organizations.

Understand the implication for technology resources called for by the future roadmap, and plan for the technologies investment and training for internal and external users to support the rollout of new capabilities and integration with new partners.

Ensure A Strong Start for the Enterprise Marketplace

After selecting the enterprise marketplace approach, there is still quite a lot of work to do in order to get the business off to a strong start. Besides looking for a technology solution, application leaders need to work with business leaders in a number of areas related to marketplace operations.

Technology Solution

Organizations with existing digital commerce platforms can enable the marketplace model by deploying a marketplace solution on top. Sample vendors include Mirakl and IZBERG.

Organizations starting from scratch can deploy digital commerce solutions with native marketplace functions. Sample vendors include AppDirect, Avetti Commerce, Broadleaf Commerce, Omnyfy, Shopex, Spryker and StoreHippo. Organizations may also need service providers for consulting and implementation, as marketplaces often need to be tailored to the specific business model and capabilities defined by the organization, and therefore can require significant customization and integration with the application environment.

Partner Sourcing

When launching the marketplace from scratch, organizations often have to proactively seek partners that can deliver the desired services and meet the qualification requirement of the marketplace. Refer to the marketplace model design for products offerings, and define the types of partners you want to bring and their qualifications. Make partner applications available on your website and on social media, attend tradeshows and industry events, and seek referrals from existing partners to cast a wide net (see "Model Your Ecosystem to Identify the Partners Needed for Digital Business" for more information).

The initial group of partners are important as they give prospective customers and partners a sense of the quality of the partners you try to engage with, so be more selective with the initial group. Look at the value proposition from the partners' perspectives as to how they can benefit from joining, and develop a persuasive storyline accordingly.

Page 12 of 16 Gartner, Inc. | G00386889

Revenue Model

The revenue model is a key focus area when designing the marketplace model and securing partners. Not all marketplaces make money from day one. Many try to gather the momentum so they can reach a critical mass of users and transactions, after which monetization becomes more feasible. Organizations need to have a plan for monetization early on, even if the marketplace may not make money in the near future. Potential sources of marketplace revenue include the following.

- Commission: A percentage or fixed fee of the transaction.
- Paid-for features and tools: Advanced features and tools that help promote products and manage operations.
- Subscription: A service- or membership-based offering that gives access to different packages
 of services or functionality.
- Technical services: Including implementation, customization and integration, as well as ongoing technical support.
- Commercial services: Including customer service, payment and financing.
- Logistics: Including warehousing, pick pack, shipping and return handling.
- Advertising: Various placement in the marketplace.
- API calls: Based on the number of API calls. This is typically for marketplaces offering digital content and assets such as data and applications.

Operational Processes

Define the processes for partner applications as to the qualification and information required, time frame to give the feedback, and the onboarding process.

Define the payment flows. Some marketplaces allow partners to collect payment directly from end customers and then pay their due fees to the marketplace operator. Increasingly, organizations are collecting payment from the end customer, grouping transactions and deducting fees before distributing funds to partners. Many digital commerce payment vendors now facilitate this entire funding and revenue sharing process, along with third-party seller onboarding processes and marketplace reporting functions. Define processes for each step, and the time frame when funds are distributed. Provide partners with mechanisms to inquire about discrepancies.

For the sale of physical goods, define the responsibility for fulfillment and delivery. Organizations can use a combination of fulfillment mechanisms that include fulfillment by marketplace and fulfillment by seller, depending on the stock location and fulfillment services sellers choose.

Gartner, Inc. | G00386889 Page 13 of 16

Partner and Customer Communication and Education

Enterprise marketplace can be a big change for partners and customers in how they run the business. Communication campaigns need to be put in place to make partners and customers aware of the initiative, convince them of the benefit and get them on board.

More importantly, organizations need to offer the right tools to make it easier for partners and customers to use the marketplace. For example, some distributors may use of paper or spreadsheets to manage inventory, order taking and customer data, and don't have the tools to connect such data to the marketplace. Ideally, organizations implement partner management solutions to help partners digitize key operational processes before connecting them to the marketplace. This will be an ongoing exercise where manual processes will be gradually replaced by digital solutions.

In addition, education and training need to be put in place to help partners and customers change behavior, as many that are working in a traditional fashion may shy away from using digital tools. Providing ongoing training and handholding to make them more comfortable with using the tools and ensure they see the benefits for themselves, is the most effective way to encourage usage and adoption.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Scaling Digital Commerce Into a Digital Platform Business"

"Eight Ways Ecosystems Supercharge Business Models"

"Balance Marketplaces and Direct Channels for Digital Commerce Growth and Customer Engagement"

"What's Hot in Digital Commerce"

"How to Develop a Digital Commerce Strategy"

"Hype Cycle for Digital Commerce, 2018"

Evidence

- ¹ "Sourceability A marketplace the Size of Amazon," Spryker.
- ² "Alstom's StationOne, Online Marketplace for the Mobility Sector, Opens for Business," Alstom.
- ³ "Texas SmartBuy Procurement Services," Texas SmartBuy.
- ⁴ "Case Study: Best Buy," Mirakl.
- ⁵ "Case Study: Eprice," Mirakl.

Page 14 of 16 Gartner, Inc. | G00386889

This research note is restricted to the personal use of fabian.rebeiro@omnyfy.com.

- ⁶ "Mirakl Powers New Groundbreaking Online Marketplace and Retail Concept: Afound," Mirakl.
- ⁷ "Simon Launches an Online Marketplace for Its Brands," Digital Commerce 360.
- ⁸ "Why we build Veracity," Veracity.
- ⁹ "Toyota Launches New E-Commerce Site for Forklifts," Avensia.
- ¹⁰ "Homepage," RIO.
- ¹¹ "Introduction for New Users," EPEC.com.
- ¹² "Service "One Belt, One Road" Yipike International Business Platform Transaction Amounted to 17.5 Billion Yuan," EPEC.com.

Gartner, Inc. | G00386889 Page 15 of 16

This research note is restricted to the personal use of fabian.rebeiro@omnyfy.com.

GARTNER HEADQUARTERS

Corporate Headquarters

56 Top Gallant Road Stamford, CT 06902-7700 USA +1 203 964 0096

Regional Headquarters AUSTRALIA BRAZIL JAPAN UNITED KINGDOM

For a complete list of worldwide locations, visit http://www.gartner.com/technology/about.jsp

© 2019 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. It consists of the opinions of Gartner's research organization, which should not be construed as statements of fact. While the information contained in this publication has been obtained from sources believed to be reliable, Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner research may address legal and financial issues, Gartner does not provide legal or investment advice and its research should not be construed or used as such. Your access and use of this publication are governed by Gartner Usage Policy. Gartner prides itself on its reputation for independence and objectivity. Its research is produced independently by its research organization without input or influence from any third party. For further information, see "Guiding Principles on Independence and Objectivity."

Page 16 of 16 Gartner, Inc. | G00386889