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Leveraging the buying power of networks – how D2N could transform eCommerce

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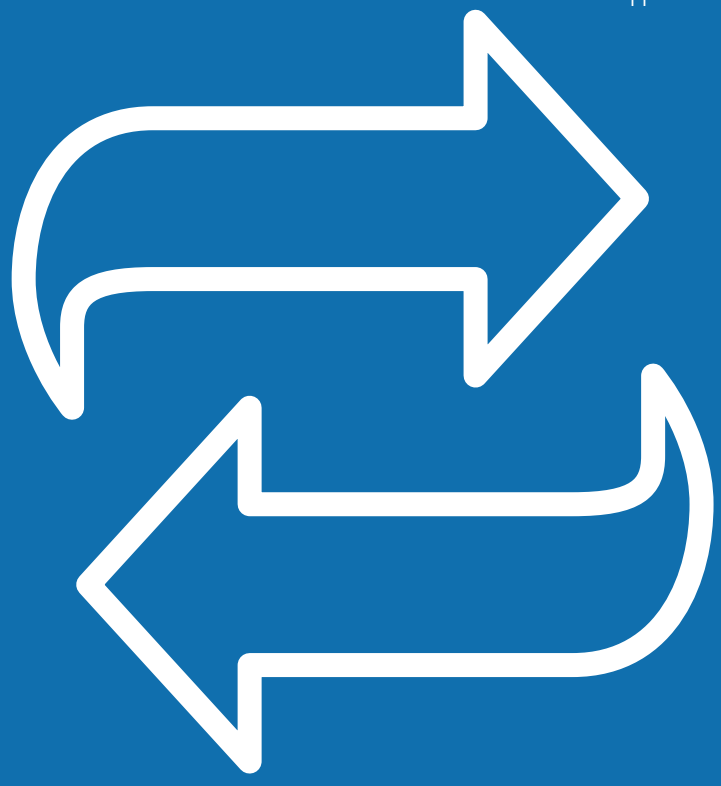


Leveraging the buying power of networks – how D2N could transform eCommerce

01 The age of D2C – and how it could end

Enabled by the digital transformation of our economy, direct to consumer (D2C) has been one of the biggest trends in commerce over the last few years. As such it is also a key area of focus in the check-out process of merchants selling online. When engineering check-out procedures and technology online merchants aimed at a seamless purchase transaction, while identifying fraud, risky consumers, and risky shopping carts by means of association and decision tree rules. Biometrics analysis was added to also distinguish fraud from friendly fraud. The last decade was all about the arbitrage between consumer convenience (time to check out and seamlessness), consumer acceptance (enabling a purchase for those interested) and perceived consumer risk (blocking those transactions and consumers that appear risky).

All this took place against the backdrop of a D2C relationship. However, if we look into the future, D2C could soon form only a part of a continuously expanding landscape: Worldwide megatrends will accelerate a shift away from D2C relationships towards direct to many relationships (D2N), forcing the check-out procedures and underlying data analysis to transform and acknowledge consumer network linkages.

But how will this come about – and what does it mean for businesses?

02 The new complexity in online commerce check-out

The shift away from D2C and to D2N rests on three building blocks – worldwide megatrends, the rise of the sharing economy and a resulting shift in consumer demand and purchasing power. These are our three assumptions:

Global megatrends

The necessity to rethink individual purchasing power versus collective purchasing power on a consumer level will emerge because of worldwide megatrends such as digitization, income inequality and artificial intelligence. These mega trends will accelerate and push structural shifts in employment. The concept of an unconditional basic income could become popular in western societies and be initialized across countries.

The sharing economy

Sharing and peer-to-peer lending are concepts that are already well established in underbanked markets (e.g. India, South Africa etc.) where people trust each other while not having the underlying western world mechanisms of identification (ID) scores. We assume that being exposed to income safety will not remedy the desire to consume and trigger a rise of online mediated services to share or collaboratively consume products (in particular high-cost products with low utilization – drilling machines, cars etc.). Therefore, it is assumed that the sharing economy is on the rise in western societies driving our financial freedom by means of formalized socialized financial networks.

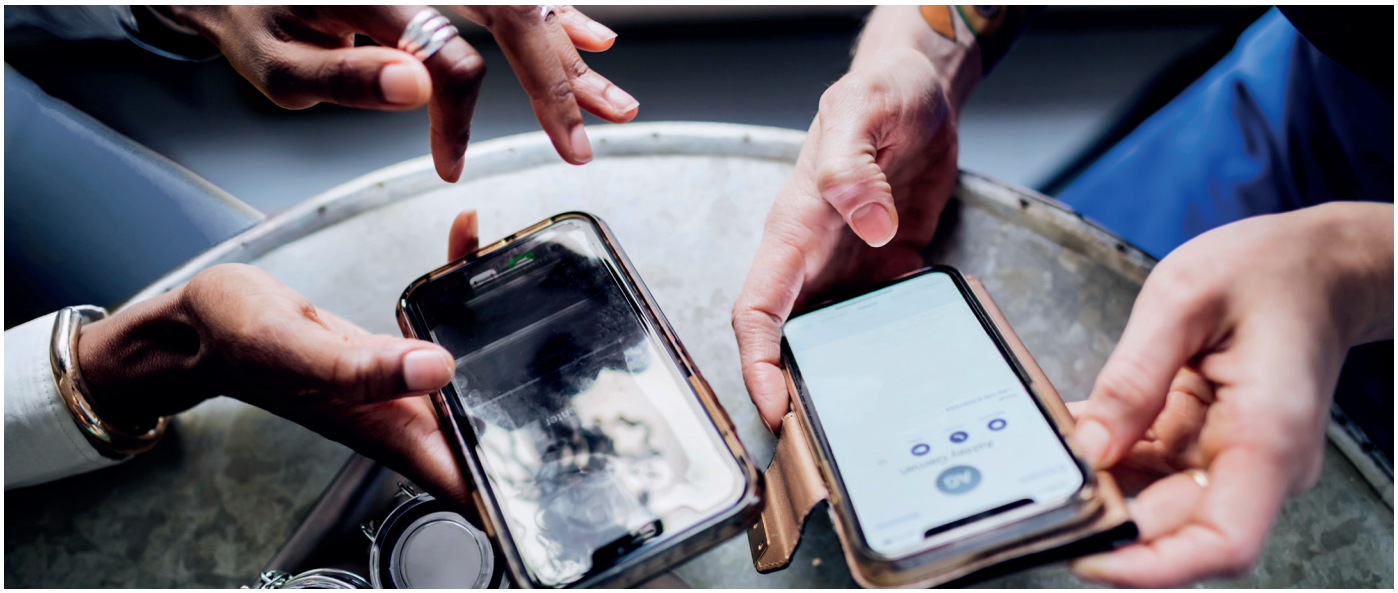
Shifting consumer demand

The current digital, yet D2C business, focuses on the consumer only. The decision is always on a consumer level and not on a group and or network level of consumers. However, there are many combinations of agency relationships affecting a merchant's go-to-market position. A shift in demand and in purchasing power of consumers will be the result of assumptions one and two.

What follows for eCommerce

When consumers have combined their spending power based on a clear and transparent contract (a purchase association), how would they use such a contract to purchase and initiate a payment?

At this point in time the merchant would neglect the new identity constituted by the network and as a result would restrict the forms of payments, thus potentially negatively impacting the conversion. Therefore, when consumers join forces to purchase a product, the decision engines and cadence of decisions need to be transformed. The aim should be to ensure that information asymmetry is as low as possible – for the association of consumers to engage and for the merchant to enable the purchase.



03 How selling online works – a high level explanation

Making a payment online is often the final step in a consumer journey. For the merchant the check-out experience is the difference between the consumers' intent to purchase and actually generating revenue from selling the shopping cart to the consumer. Therefore, the check-out experience (the steps taken by the consumer during the purchase experience) is monitored and researched intensely to make it appear as simple and seamless as possible.

Check-out related research is very much linked to understanding consumer behavior. The underlying data models aim to understand what conditions enable a seamless transfer from intent to purchase. Larger merchants such as Amazon make use of constant A/B testing within the check-out widget, changing attributes such as the size and position of buttons, colors, wording, and font size, but also the order of payment methods and the number of payment methods displayed.

In general, payment methods and underlying payment risk reflect what consumers in the particular target market feel comfortable with. The Payment Methods Report 2018[1] highlights the importance of making the right payment methods available as they are geographically and culturally bound. The Consumer Payer Report[2] looks at eight dimensions impacting check-out success:

- **coverage** – a measure of payment methods available to the consumer
- **preference** – a measure of payment method acceptance by consumers; the percentage of consumers that choose to use a certain payment method
- **conversion** – a measure of the number of consumers that complete the payment setup process using a distinct payment method
- **cash flow** – a measure of how long it takes to settle a payment, once it becomes a receivable
- **success** – a measure of the number of payments that are successfully collected
- **churn** – a measure of the number of consumers that the merchant is incapable of collecting from, after a given time
- **cost** – a measure of how much the payment method costs to build, operate and process
- **visibility** – a measure of how long it takes to receive actionable information about a payment

Accordingly, the check-out is divided into measurable process steps from consumer validation by means of scoring and behavioral analytics all the way to dunning and collection processes in the event of late payment.

[1] The Paypers (July 2018): "Payment Methods Report 2018 - Innovations in the Way We Pay".
[2] GoCardless (2019): "Payment preferences for recurring purchases. The consumer payer 2019".

In Europe online payments need to align with the Payment Services Directive Two (PSD2), a legislation that aims to drive innovation, foster competition, and increase security while reducing the payment costs for consumers. Banks are encouraged to create APIs that let third-party payment providers access consumer bank accounts on their behalf and initiate bank payments. The most well-known effect on consumers is the two-factor authentication imposed by PSD2. It is adding friction to the card check-out experience, while simultaneously simplifying the online bank payment experience for consumers. These factors combined are likely to further drive adoption of online bank payments. As consumer payment preferences shift away from cards in Europe and towards alternative payment methods, online retailers that offer these innovative methods can streamline the eCommerce experience and drive conversion in the checkout.

However, the transformation triggered by PSD2 is still about managing a D2C relationship and not a more complex D2N relationship.

04 The complexity arising from collaborative consumption

How does the sharing economy trigger a new degree of complexity for traditional online commerce settings? From a consumer relationship point of view traditional online commerce and the sharing economy are both centered around the interaction of human. In the early days researchers defined a sharing transaction as taking place without money being involved and only later, around 2015, the concept of collaborative consumption was explored. The concepts of the sharing economy, collaborative consumption, peer consumption, and access-based consumption are often used interchangeably and a unifying framework to better compare these concepts is still missing.

From a consumer relationship point of view traditional online commerce and the sharing economy are both centered around the interaction of human.

Despite that, there are clearly common advantages that all the concepts share: the better utilization of human time, the leveraging of available spending power and the efficiency of sharing products in their daily use. This obviously makes a great deal of practical and economic sense for individual consumers, the community, and the environment.

For businesses, these advantages – made possible by the introduction of the internet, information systems, machine learning and artificial intelligence – are also a source of additional complexity. This complexity in the shift from traditional online commerce towards the sharing economy is closely linked to the fact that the connotation of ownership of a good or service (and ultimately the relationship between merchant and buyer) changes – from a focus on consumers towards consumer groups.

In contrast to the sharing economy described above, today's D2C business models are tightly linked to a linear relationship between a merchant and a consumer either direct or marketplace mediated. Currently, digital D2C commerce seems to be trending away from linear one time selling towards non-linear models such as pay per use, pay per activation, pay per subscription – all driving usage of the good rather than ownership (also referred to as servicization). All non-linear models aim at a reduction of the initial

entry barrier (the price of ownership) towards the good or service and carry a direct cash-flow impact for the merchant and obviously also for the consumer. For businesses, the impact is not only on cash-flow but also on working capital as with most non-linear models ownership of the good or service remains with the distributor. With this overall more complex flow of funds, there comes an emerging need to understand more complex commerce relationships, in which goods and services are being shared within a group or between consumers.

Merchants will have to deal with more complex offerings and as a result they are facing more complex decision engines as the usage of the good and services distributed will differ. There are many variables that need further investigation if purchase associations and/or non-linear ownership-based services are to be successful. In a D2C commerce setting the risk of an online transaction is predominantly associated with product characteristics, buyer demographics and a creditworthiness score. In contrast to this, it is common practice in a B2B setting to explore and validate linkages between companies to ensure the risk of the transaction is validated against the credit worthiness of the entire group.

The ability to enable combined purchasing power in a D2N setting can be meaningful to financial robustness in many instances and foster a social financial transfer across age- and need groups, while safeguarding a flow of funds towards the merchant from a rational perspective. From a sustainability perspective it might also lead to reducing the ecological footprint should products and services be better utilized.

05 Exploring linkage – why D2N can profit more B2B than B2C know-how

Looking at the status quo of online commerce it becomes clear that merchants who want to embrace D2N business models can in fact learn more from the way B2B business is conducted than from B2C business models – even though one would assume that there's less of a difference between selling to a group of consumers and selling to a single consumer than between selling to a group of consumers and single businesses.

However, a look at how decision engines work both in a D2C and in a B2B context will show that this is not the case.

06 How D2C decision engines work (on a high level)

From an online sales conversion perspective merchants are trying to optimize the successful acceptance of a purchase transaction within an acceptable risk exposure balancing between losses and rejections (lost revenue). The merchants' management of the arbitrage between acceptance and loss follows the principle-agent theory, trying to reduce the information asymmetry: who is it, that wants to consume my product or service? How can I validate that the consumer is real? Can the consumer keep their commitment to pay?

To provide answers to these questions, consumers are asked to identify themselves by entering a set of data. In Europe, for example, the following procedure is standard when exploring popular buy now pay later options. Duplicate checks are performed to determine if a person is already existing. The check is executed by comparing the data provided by the customer against a consumer database, that is particular to the respective market. As primary fields for identification, the consumers' name, billing address and date of birth have been defined for most online verification procedures. If there is a match on the consumers' name, the billing address, and the date of birth of more than 90 % accuracy, this account is identified as being a duplicate ("greater 90 % duplicate rule"). In such a case, the consumer information will be typically merged to the existing customer account. The assigned consumer number is unique and linked to the account. Should the duplicate search not identify an existing customer account, a new consumer number will be created. For all subsequent checks the number will be used. Starting with the address validation, the address is checked regarding plausibility and postal correctness. If necessary, the address is completed with the missing parts or corrected to adjust it to the required standard. In addition to the address validation an address verification check is performed, verifying the surname (or even given name and surname) at the presented address. This check provides proof of existence of the consumer and helps identify a non-fraudulent transaction.

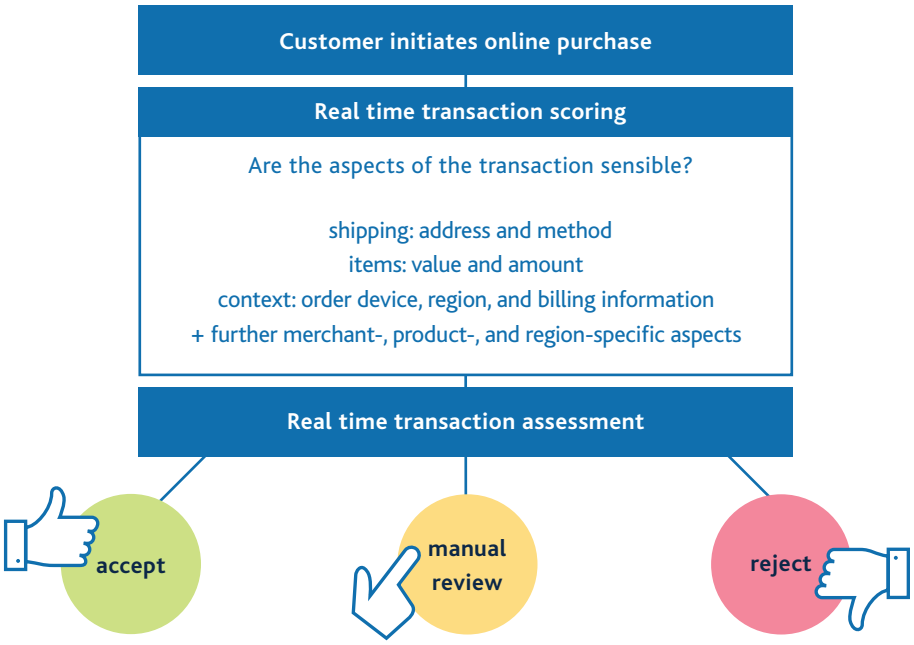
90%

If there is a match on the consumers' name, the billing address, and the date of birth of more than 90 % accuracy, this account is identified as being a duplicate

Once this has been established, typically a score request is placed to a credit bureau to determine whether a consumer has any negative list entries. This call possibly delivers negative judicial data about a given consumer. A distinction is made between "soft negative data" from collection processes and "hard negative data" coming from lawsuits and denoting arrest warrants or insolvency. In addition, a micro-geographic score is available whenever an address has been verified. It is an assessment of micro-geographical data provided and consists of aggregated information like age, type of job, duration of employment, income, purchasing-power, quality of neighborhood or of residence, size of city, building type and further attributes. Finally, an identity score is available when an address has been verified.

The resulting score is an assessment of the credit risk deriving from a consumer's details. It is a combination of the results of address validation, located duplicates, address verification, evaluations of e-mail address and domain and personal data. In a second step, after the scoring logic has been applied the information will be validated, potentially enriched and assessed following internal credit decision rules by the merchant. These rules look at basic logic statements to determine if a condition is present. Typically logged as pass/fail, they are used to find negative conditions. In the diagram below, the real time transaction scoring represents such rules and algorithms. Following this transaction and consumer risk process the order will be either accepted, rejected or manually reviewed. A review will be based on a variety of parameters that are not caught within a real time transaction scoring algorithm. The process differs by country and by payment type and also highly depends on positive and negative data available to score the consumer. Due to the setup of the D2C process there is a high correlation between the consumer risk score, the related credit limit, and the probability of default (PD). This is driven by the external credit bureau data, which is mainly based on payment history information and negative information and the weight attributed to negative data.

Graphic 1: B2C transaction assessment



07 How B2B decision engines work

In contrast to D2C relationships there is no direct correlation between PD score and the credit limit available within the B2B space to conduct business. This is driven by the underlying data for limit and score calculations. The former rely on balance sheet information, while the latter use different variables like the age of the company or the industry it operates in. A typical credit policy in a B2B setting will cover the following aspects:

1. **Initial credit assessment (credit decision) to derive a rating and correlating limit**
2. **Monitoring/limit handling along the business customer life cycle**
3. **Linkages between companies or industries**
4. **Actual payment behavior**

In contrast to a consumer database, which is mainly storing negative data, a business credit bureau will have various weights and indicators linked to a company, hence the score value returned by a credit bureau will likely differ and needs interpretation and conversion into a probability of default that needs to be linked to a merchant's risk appetite.

08 For D2N, learn from B2B

The main difference between B2B and D2C risk engines is the linkage: In a D2C setting the PD is focused on the individual consumer, whereas the PD in a B2B setting is yet another interpretation of a company's risk that is linked to a group of companies, correlated with industry averages etc. In a B2B setting the most important way to mitigate the information asymmetry between seller and buyer is to look at peer portfolios and link companies, creating a "trusted" network within a certain industry to see anomalies in payment terms, external credit bureau data, balance sheet information etc. Accordingly, since the network effect within B2B settings is more mature, merchants who want to develop a D2N business model to get their share of the sharing economy should look first and foremost to B2B decisioning rules and processes and adapt those to their needs – because traditional B2C and even D2C thinking won't get them very far.

09 About Arvato Financial Solutions

Arvato Financial Solutions offers professional financial services for international and local companies, allowing them to entrust their financial backend processes to a specialist and focus more on their core business. Our services range from credit risk management as well as payment, factoring, receivables management and debt collection. Our team comprising of around 7,000 experts in 15 countries are united by a common goal: seamless and efficient financial services for the best possible financial results of our customers.

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