



NEOSCHRONOS

ADVISE • DEMONSTRATE • INSPIRE

2016 - 2015 INSIGHTS SERIES



PREFACE

by Dr. Thomas Papanikolaou on January 1, 2017

Dear reader,

This booklet is a collection of highlights from Neos Chronos' work in 2016 and 2015, a period in which we successfully delivered a sizable number of thought-leading assignments on

- establishing digital business models that create unfair advantage and enable rapid growth for software companies
- developing an integrated user experience model for enterprise communications to create a new position of growth for telecom companies
- scaling lean startups for sales success

Our customers have pushed us to become experts in resolving seemingly contradicting requirements: achieving predictability without losing innovation ability and agility (startups) and becoming agile and innovative while delivering predictable results (big enterprises). We are both grateful and thankful to them. We feel privileged that we get to collaborate with amazing companies, meet awesome people, and experience the moments of joy and personal satisfaction that are only possible when we see our customers thrive.

We love making our customers successful.

Enjoy reading!

CONTENTS

Preface	2
Digital Customer Segmentation: it's all about Trust.	4
3 Ways To Evaluate Disruption Potential.	8
Deciphering Digital Business Models.	11
Polymorphic Service Propositions.	14
A Primer to Communications Security.	17
The Achilles heel of Amazon's Business Model.	20
A simple model for Sales Success.	22
How to scale a Lean Start-Up.	25
The Technology behind the Evolution of Shopping.	28
The practical guide to Enterprise Wi-Fi Calling.	30
FEATURED SERVICE: Lean Canvas Workshop	32



DIGITAL CUSTOMER SEGMENTATION: IT'S ALL ABOUT TRUST.

by Dr. Thomas Papanikolaou on Sep 6, 2016

Today's customers (consumers and enterprise users) have increasingly one thing in common: they are **millennials** in their prime of spending, who grew up in a technology and service context where shared access is preferred over ownership business models, social media is used as a natural way for self-expression and keeping-in-touch, and sharing of private data is often used to pay for "free" access to services. In

that context customer **segmentation** needs to drastically evolve to be able to capture the essence of millennials and **upcoming digital natives**. In this article we list key aspects a digital customer segmentation model needs to consider.

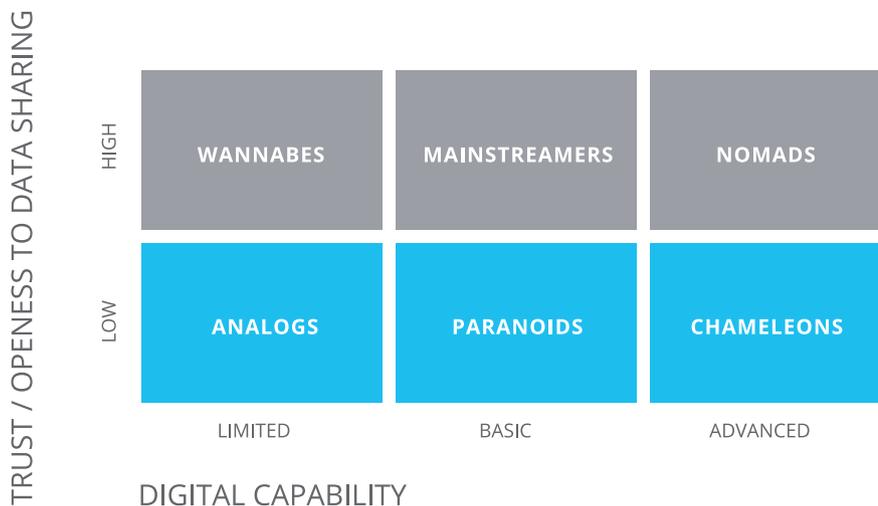
DIGITAL ENGAGEMENT

Knowledge@Wharton described digital user segmentation succinct-

ly along the dimensions of digital capability and trust / data sharing under the "Bring Your Own Persona (BYOP)" model. Knowledge@Wharton's focus has been on finance institutions, however BYOP is robust enough to be used in a variety of, if not all, digital customer domains.

BRING YOUR OWN PERSONA

DIGITAL USER SEGMENTATION MATRIX



Digital capability is defined as the user's proficiency in utilising all the latest features, functions and services available in social, mobile, wearables and Internet of Things, e-commerce ... to improve their overall effectiveness and quality of life.

Trust is defined as "user willingness to share personal data and in some cases, relinquish privacy in exchange for a perceived benefit".

According to Knowledge@Wharton, "the distribution of users across these digital profiles will obviously change over time with a general trend toward the upper right (Nomads) of the segmentation map".

Detailed definitions of each segment and typical distributions can be found at the [original article](#).

We consider “relinquishing privacy” a form of payment. When it comes to digital services, we tend to use the terms “user” and “customer” interchangeably.

SERVICE ENGAGEMENT

The combination of digital capability and trust depicted in the BYOP model provides a necessary foundation for digital user segmentation. As the following example demonstrates it is however not sufficient.

SOCIAL MEDIA USER SEGMENTATION (SOURCE: [FORRESTER BLOG](#))

Depending on a user's willingness to create social content, social media users could be categorised in

- **Creators:** publish a blog, own web pages, create and upload video / audio, write articles or stories and post them
- **Conversationalists:** update status on social networking site, post updates on Twitter

- **Critics:** post ratings on products or services, comment on someone else's blog, contribute to online forums, contribute to / edit articles in a wiki
- **Collectors:** use RSS feeds, vote for websites online, add tags to web pages or photos
- **Joiners:** maintain profile on social networking site
- **Spectators:** read blogs, online forums, customer ratings / reviews, tweets. Listen to podcasts, watch video from other users.
- **Inactives:** none of the above

In the case of social media, digital capability and trust alone cannot uniquely position a user in the Creator segment. For that additional information is necessary e.g. amount of time the user invests in creating content in general. If you ever wondered why social networks replicate editor features from their competitors, or acquire competitors, you now have possible answers e.g. to motivate Creators to switch over, or to acquire Creators. The key insight: acquiring Creators for digital services might be as important as acquiring Intellectual Property.

Creators in the digital applica-

tions ecosystem are also known as Developers. Developers create applications that make app stores a worthwhile place to visit by millions of users, and turn connected devices to items users consider worth buying. In other words, developers create service engagement. The key insight: you are missing out on service engagement potential if you are offering a digital service that does not allow developers to access its functionality and combine it with other services to create improved and integrated user experiences.

IT'S ALL ABOUT TRUST

With increasing [mobile penetration](#), millennials in their prime, and [Generation Z](#) closely on their heels, it is fair to assume that digital capability will soon become a less important segmentation criteria. To win over Creators, they need to trust that the data they are willing to share will be used to create “a future benefit for them or a broader group”.

This is why we believe that Trust is the single most important criteria to include in digital custom-

er segmentation. Trust needs to permeate all human and **business interactions** resulting from digital customer segmentation.

MONETISABLE MOMENTS

We started this article mentioning “consumers and enterprise users”. For digital services this differentiation is rapidly becoming meaningless. The reason is that it whether a digital service is “consumer” or “enterprise” is decided by the active context at the moment of use. Here is an example:

- **Telefonica** recently launched its **O2 Home** offering in the UK, which includes a package of smart sensors communicating with a connected hub that allow home owners to remotely control a home camera, check presence of a person being in a room, turn on / off appliances connected to smart plugs, adjust the heating depending on temperature, etc. This has been launched as a consumer offering. Forget this for a moment and imagine launching the same package to small medium enterprises. Name it e.g. “Smart

Enterprise”, allowing to use the camera and presence for security purposes, smart plugs to save electricity, and the thermostat to both save heating costs and alarm in case of fire. The same package, the same people, different use case descriptions of the same functionality, and an experience that becomes “enterprise” by a simple change of context / location. **O2 Home** in its core is a “Smart Premises” **Polymorphic Service Proposition**, where premises is the Home or the Enterprise or, to mention another possible future context, the Car.

Digital User Segmentation together with **Polymorphic Service Propositions** can enable companies to map users on a single user profile, for which the user segment is determined in real-time at each interaction based on contextual information. By deriving such **actionable insights using analytics on big data**, companies can help users “improve their overall effectiveness and quality of life” at home, in the office and anywhere in between. Every service interaction becomes a monetisable mo-

ment. Hereby monetisation can be defined in multiple ways i.e. winning trust, increasing loyalty, up-selling, etc.

In summary:

The combination of digital capability, trust and service engagement is a necessary and sufficient basis for digital customer segmentation. The key opportunity is in using real-time contextual information to place a customer in a segment dynamically at each service interaction and act appropriately. This polymorphic view of a customer (single profile, dynamically changing digital segments based on contextual information) better reflects user experience. Focusing on improving effectiveness and life quality across a user’s daily journey creates multiple monetisable moments, and renders the static differentiation between consumer and enterprise users meaningless.

CREDITS & REFERENCES

For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Wikipedia: [Market Segmentation, Generation Z](#)

Goldman Sachs: [Millennials Coming of Age](#)

Knowledge@Wharton: [Bring Your Own Persona](#)

Forrester Blog: [Global Social Technographics Update 2011](#)

Ericsson: [mobile subscriptions outlook \(Q3 2016\)](#)

Telefonica: [Website, O2 Home](#)





3 WAYS TO EVALUATE DISRUPTION POTENTIAL.

by Dr. Thomas Papanikolaou on Jul 28, 2016

In our work as advisors to start-up founders, company executives and investors, we are often asked for our opinion on the disruption potential of new service and product ideas. In this article we share 3 questions we use to quickly evaluate an idea's disruption potential and highlight where the execution and operational focus for a potential investor should be.

QUESTION 1: DOES THE IDEA DRAMATICALLY REDUCE COST FOR THE END-USER?

The ability to produce and deliver at a low-cost is a mandatory part of a company's continuous improvement process. In our evaluation we look for a "secret" ingredient within the idea that creates a cost base many times lower than any evolutionary optimisation could ever achieve.

As an example, think of the introduction of the **quartz wrist watches**. The "secret" ingredient was using an electronic oscillator regulated by a quartz instead of mechanical parts and springs. This architectural change meant

that quartz watches could be produced at a small fraction of the cost of mechanical watches. The redefined cost base and resulting low price points made wrist watches accessible to a large low-end market who "did not need the full performance valued by customers at the high end of the market". A Low-End Disruption as per **Clayton M. Christensen's, Disruptive Innovation** terminology.

An important point to make is that the definition of "cost" goes beyond monetary aspects. Depending on the idea the cost can be defined as the cost to the person, the business, the society and the environment (as well as combinations thereof)

QUESTION 2: DOES THE IDEA RESULT IN A RADICALLY SIMPLIFIED USER EXPERIENCE?

Offering a great user experience is the aim of every company. We are looking for those re-imagined user experiences that will allow to reach "customers who have needs that are unserved by existing incumbents". A New-Market Dis-

ruption as per **Clayton M. Christensen's, Disruptive Innovation** terminology.

Apple's iPhone User Interface is a deservedly overused example. Apple created a user interface so simple that anyone could use a highly sophisticated smartphone without reading a manual first. This has opened the path for the mass smartphone adoption we experience today. The concept of associating applications to tasks created a new service consumption pattern that was proven to drive increased service consumption.

QUESTION 3: DOES THE IDEA RESULT IN A REDEFINITION OF REVENUE FLOWS?

This question aims at identifying if the new idea changes the revenue structure and movement within and across industries.

- Within the same industry, we look if the idea significantly changes the revenue distribution across participants in the value chain or, more drastically, allows to bypass participants in

the value chain and earn what has been their revenue. A great example is **TransferWise** who enable low-cost money transfers across countries. The “secret” ingredient: a **process** that avoids costly currency conversion and money transfers crossing borders. In other words TransferWise (a Financial Conduct Authority regulated company) bypasses banks for international money transfers.

• Across industries, we look if the idea can employ an **asymmetric business model approach** i.e. create value in another industry, and create a “hook” that allows to transfer the revenues from that industry. The Android Operating System is a great example: Google develops and offers Android for free to **phone manufacturers**, and uses the bundling of Google Apps to turn any owner of an Android phone into a customer of Google’s advertising business. Thus revenue “flows” from customers acquired through software in the telecoms industry to be “captured” in Google’s advertising business.

BRINGING IT ALL TOGETHER

Understanding how a service and product idea reshapes cost base, user experience, and revenue flows is helpful to quickly evaluate the idea’s disruption potential and highlight where the execution and operational focus for a potential investor should be. For example, providing the best possible user experience is not a mandatory condition for a low-end disruption to succeed. Similarly, an idea applying an asymmetric business model requires initial investment to create value and a “hook” to acquire customers in another industry, and transfer them to capture revenue flows within one’s own business model.

A service and product idea can be disruptive in more than one way. For example, TransferWise is a low-cost and revenue flows disrupting service within the banking industry. Google’s Android is a low-cost and revenue flows disrupting product across the software and advertising industries. **Polymorphic Service Propositions** have the potential to be disruptive in terms of low-cost and user experience.

An idea does not have to be disruptive in multiple areas to be considered. It is worth noting that Apple’s iPhone has been primarily a user experience disruption at the time it was launched. The new user experience was so profound, that it resulted in Apple being able to negotiate revenue flows redistribution between Apple and carriers, while at the same time creating a high margin product.



CREDITS & REFERENCES

For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Wikipedia: [Quartz clock](#), [Clayton M. Christensen](#), [Disruptive Innovation](#)

TransferWise: [Website](#), [How TransferWise works](#)

PhoneArena: [List of phone manufacturers](#)





DECIPHERING DIGITAL BUSINESS MODELS.

by Dr. Thomas Papanikolaou on May 24, 2016

Have you ever wondered why Facebook paid \$19 billion to buy **WhatsApp**? What value Microsoft saw in the \$8.5 billion take-over of **Skype**? Why Google continuously launches new service propositions in markets that seem so far away from its core business? And why the European Commission thinks (rightly or wrongly) this practice is in the case of Android **anti-competitive**? In this overview article we will explain the mechanics of digital business models and how companies use them to cross user segments and industry borders to create unfair business advantage.

CREATING UNFAIR DIGITAL ADVANTAGE

In the digital space, every product / service created has a **complementary** product. Such complements are consumed within products, however products and their complements do not have to reside in the same industry. For example, electricity (utility) is a complementary product to digital devices (device manufacturing). Internet connectivity (telecoms)

is a complementary product to Facebook (advertising) and Skype (telecoms). As the examples show, such complementary products are more than simple accessories: they are essential.

This close relationship between products and their **complements** goes even further: whenever the price of a complement decreases, the demand for the product increases. The opposite is also true: whenever the price of a complement increases, the demand for the product decreases. For example, due to connectivity costs (still as of 2016), people use their devices and data services less when they travel abroad / they are roaming.

In a traditional **ecosystem**, there is a balance between products and their complements and every participant is earning a fair share of the revenue generated. This balance, however, can be distorted when one of the ecosystem participants starts controlling the price of complementary products, “starving out” another participant,

and transferring the revenues and even customers from that participant to itself. Such an action creates asymmetry in the revenue distribution and, thus, unfair advantage.



CREATE VALUE IN A NEW INDUSTRY

Amazon pioneered crowd-sourced recommendations for books (and later for all products sold through its e-commerce platform). These recommendations were perceived as trustworthy, offering a new way to choose books / products. Amazon also offered online a much larger catalogue than any physical store could, increasing the chances for customer to find the product they wanted.

ACQUIRE & TRANSFER CUSTOMERS

By avoiding the retail store running costs, using the internet to drive logistics, and mass-scale purchasing, Amazon was able to offer - most of the time - the lowest possible price. This ensured that even those customers who had visited a physical store - to touch and feel a product - would return to Amazon to buy it.

CAPTURE PROFITS IN OWN BUSINESS

Amazon would capture revenues of large scale product sales within its e-commerce platform.

CASE 1: AMAZON E-COMMERCE

Amazon's Business Model can be regarded as the first example of an asymmetric business model, exhibiting three (3) fundamental ingredients.

It is worthwhile noting that since its original inception, Am-

azon performed further asymmetric steps e.g. launching the Fire tablets at product cost (value creation and customer acquisition) together with its own app store (customer transfer) to capture more revenue on its e-commerce business model.

CASE 2: GOOGLE ANDROID

Google Android is a further, more advanced, example of an asymmetric business model in action.

CREATE VALUE IN A NEW INDUSTRY

By creating Android and offering it for "free" to OEMs Google created value in the device industry, commoditising along the way the value of Symbian, the prices of mobile phones, and accelerating the demise of many companies including Nokia.

ACQUIRE & TRANSFER CUSTOMERS

Google bundled Google Apps with Android, ensuring that every owner of an Android phone became instantly a customer in Google's Advertising Business Model. It is this bundling that the European Commission regards as anti-competitive

CAPTURE PROFITS IN OWN BUSINESS

Google monetises user data knowledge in its advertising operations.

CASE N: WHATSAPP, SKYPE, AND MANY MORE

With the above structure, it is now easier to answer why Facebook (advertising) bought WhatsApp (telecoms), Microsoft (software) acquired Skype (telecoms), and why many other companies are growing asymmetrically into new industries.

In summary:

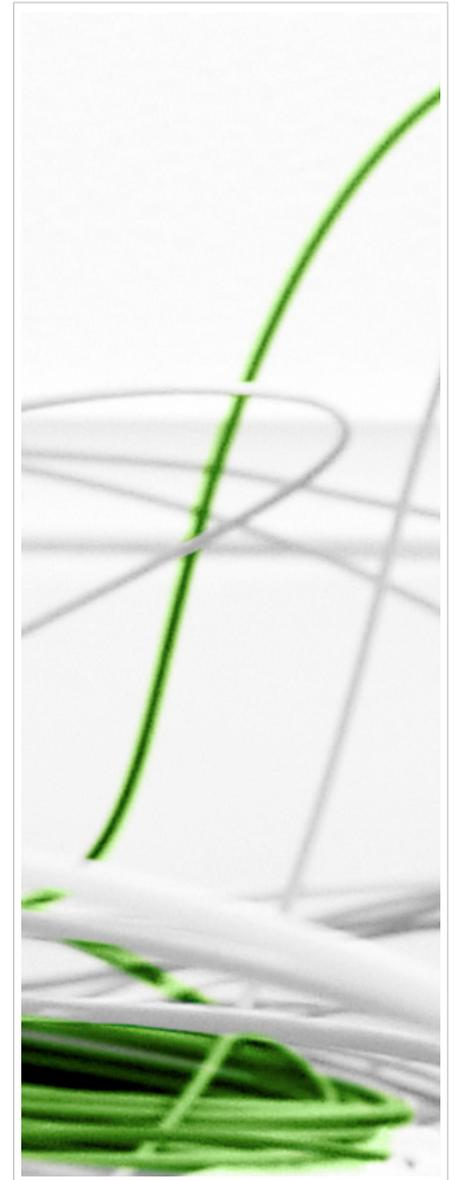
Digital Business Models are inherently asymmetric i.e. by design they force customers and profits to migrate from one industry to the other. They create unfair advantage by commoditising another industry and are thus prone to anti-competitive actions. Deciphering the mechanics of the such Asymmetric Business Models is the first step to attaining clarity on the moves of players such as Google, Facebook, Microsoft and how those could affect the industry your business operates in.

CREDITS & REFERENCES

Asymmetry has been used in conjunction with business modeling since the appearance of Amazon. For us though, it is the people at [VisionMobile](#) who first provided a concise description. We use their terminology as a basis for our work with clients and we highly recommend reading their excellent [blog](#) on the subject.

For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Wikipedia: [Complementary Good, Ecosystem](#)
 Microsoft: [Skype Acquisition](#)
 Facebook: [WhatsApp Acquisition](#)
 Google: [European Commission Antitrust motion](#)
 VisionMobile: [Asymmetric Business Models](#)





POLYMORPHIC SERVICE PROPOSITIONS.

by Dr. Thomas Papanikolaou on April 21, 2016

What if you could design a service proposition once and use it for multiple customer segments, meeting needs arising in different situations? Then you would have the initial ingredients of what we at Neos Chronos call a “polymorphic service proposition” (abbreviated as PSP). This article provides

a quick introduction into the concept and highlights a number of reasons why a CEO, CMO, CTO of a company should care to learn more and act.

To clarify the notion of polymorphism in the context of service propositions we will use the

following 3 examples. The title of each example reflects the mechanics / underlying implementation of the proposition, while the text describes the user experience.

POLYMORPHIC SERVICE PROPOSITIONS	CONSUMER	ENTERPRISE
1. REVERSE-CHARGED CALL HUNTING	A mobile carrier offers a children safety service, as a “Call the Parent” phone number. Charges for this service are paid by the parents. A call to the number rings consecutively each parent, optionally assigned family relatives, and finally a dedicated 24/7 emergency number to ensure calls from children to their parents are always answered.	An company offers clients a no-charge “Contact Sales” number. When a client calls the number, it rings consecutively all members of the sales team. If no one is available to answer, the call is forwarded to a 24/7 line so that the client can always reach the company.
2. PERSISTENT COLLABORATION	A Communications Application shows the thread of messages, files, voice calls and videos exchanged between users whenever a communication session is set up. This provides the communicating parties with a quick context of the previous interactions.	A Contact Center Operator Console brings up the history record for a calling client. This allows the operator to review previous interactions and handle client issues faster.
3. GUEST SERVICE LOGIN	A WiFi Router with a “guest login” feature is used at home to offer an easy login for friends visiting the family without revealing the router’s password.	A WiFi Router with a “guest login” feature is used at a small startup / company to provide WiFi access to visiting clients and partners.

There are many more such examples that can be “uncovered” or “invented”. In fact, every well-designed software makes use of polymorphism techniques to add flexibility, and reduce duplication. The reason why such cases are becoming obvious at the service proposition level originates from a simple yet intriguing

KEY INSIGHT

The consumer and enterprise personas and their associated behaviours are converging. This is due to the exposure of Millennials from young age to technology, and the natural resulting convergence of usage patterns in every service being created to serve their needs. The “surfacing” of more and more polymorphic service propositions simply reflects our evolved ability to recognise these common and reusable service patterns (which always existed within well-designed software).

BENEFITS

The reason a CEO, CMO, CTO of a company should care about PSPs is that thinking and acting

in terms of polymorphic service propositions has several benefits:

- The underlying mechanics of a polymorphic service proposition are designed and implemented once and can be used towards multiple customer segments. This provides a significant advantage in Time-To-Market and reuse of existing investments (lower CAPEX). Refer to all our examples.
- As the underlying mechanics remain the same, polymorphic service propositions require little to no additional learning for users when they switch context. This allows to create much more natural upgrade paths in terms of user experience, which creates a unique competitive advantage. An succinct example is Microsoft buying Skype (a consumer proposition) and leveraging Skype's user interface to revamp Microsoft's enterprise offering. The familiar underlying mechanics of Skype and **Skype for Business** enable consumers to become productive enterprise users much faster. A further, more recent example, is **Facebook at Work**. Refer to our key insight!

- Polymorphic service propositions stand for user experience patterns that re-occur in daily life in multiple situations. They enable to offer packages of “user experiences” rather than packages of “features”. For example a “WiFi guest login” experience, can be bundled with both a consumer home broadband package as well as Unified Communications enterprise proposition. At Neos Chronos we speak of service providers becoming “integrators of user experience”.

COURSE OF ACTION

An organisation needs to take a number of transformational steps to take full advantage of polymorphic service propositions. Here are some indicative examples in the context of Communication Service Providers:

- In technology terms, the service architecture needs to be further consolidated and unified. For example, if you are launching Voice over LTE, make sure you purchase one (1) telephony application server that can serve both consumers and enterprise

users. Make sure you have one (1) charging system, one (1) user profile, ... Refer to our first example.

- In marketing terms, the organisational division between consumer and enterprise marketing needs to be urgently reconsidered. Our experience shows that such a division often causes duplication. For example, having both Consumer Rich Communications clients and Enterprise Unified Communications Clients with the same functionality, implemented twice, offered to “different” customer segments, via different sales channels, ... is neither economical nor does it recognise the convergence of user behaviours. Adopting a unified, holistic view on the user experience can remove duplication, and release resources to be utilised to drive innovation.

- Finally in strategic terms, CSPs must review their existing service propositions portfolio with the purpose to identify polymorphic service propositions and opportunities to combine those into integrated user experiences.

In summary:

The consumer and enterprise personas and their associated behaviours are converging. This is due to the exposure of Millennials from young age to technology, and the natural resulting convergence of usage patterns in every service being created to serve their needs. The “surfacing” of more and more polymorphic service propositions simply reflects our evolved ability to recognise these common and reusable service patterns (which always existed within well-designed software). To fully benefit from polymorphic service propositions it is necessary to critically review the technology strategy and the organisational division between consumer and enterprise marketing and move from offering silo-service propositions towards offering integrated user experiences

CREDITS & REFERENCES

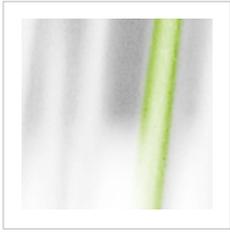
For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos Terms of Use.

Wikipedia: [Polymorphism](#)

Microsoft: [Skype for Business](#)

Facebook: [Facebook at Work](#)





A PRIMER TO COMMUNICATIONS SECURITY.

by Dr. Thomas Papanikolaou on March 11, 2016

There are many good reasons behind securing communications within the enterprise and across enterprise borders as part of a company's **Business Information Security** strategy. Undoubtedly, "preventing unauthorized interceptors from accessing telecommunications in an intelligible form, while still delivering content to the intended recipients" (definition from **Wikipedia**) is mandatory for any enterprise (asset protection) and any individual (privacy protection).

So what is the best way to secure communications i.e. voice, video, messaging, file exchange, file storage, etc? To answer this question let us look at the individual components that are taking part in secure communications.

- **The Device**

The first lesson in attacking secure systems is to attack the weakest link. For example, it is easier to place a bug into a device to capture a voice call, than trying to break a voice encryption algorithm using a network

of servers. The learning is that if you can tamper with a device, then communication may be easily compromised. Companies like **SilentCircle** have recognised this and offer hardware that can not be easily tampered with.

- **The Firmware**

After a device is turned on and the completion of power-on self-tests, the firmware (**boot loader**) is the piece of software that runs to load the operating system. It is fair to claim that the firmware is the most important piece of software from a security point of view. Having the ability to manipulate the firmware can provide full access to any communication (and any function) of the operating system. Prominent public examples of such "firmware attacks" include **Thunderstrike** and **Dark Jedi** (attention: explicit language). Protecting the firmware is only possible when you have control over it. There are several options you may choose:

- You can deploy open source firmware on your devices. By

nature, open source firmware is far more difficult to manipulate without the community noticing.

- You can use devices that vertically integrate hardware and firmware, see **SilentCircle** .

- Finally, if you want to offer a broader choice of mobile devices, you can use **Trustonic** 's technology, which provides a **Trusted Execution Environment (TEE)** on **ARM** chipsets. As of the writing of this article, Trustonic's TEE is available on more the half a billion devices.

- **The Operating System**

Many of the communication tasks are implemented on top of the Operating System using its **Application Programming Interfaces (APIs)**, and thus securing the OS is a prerequisite to secure communications. Just as the firmware has super-user access over the OS, the OS has super-user access over all communications applications. Hardening the operating system usually means creating a bespoke version of it with all unneces-

sary parts removed. This is the path the many communication companies take, and Android (by virtue of being open source) has become a natural choice for mobile, in the same way Linux has become the standard for PCs and Workstations. Important note: using an open source OS like Android is not a security guarantee, as [Amazon Fire OS](#) users had to experience.

• The Application

While less likely, applications are also used to intercept, capture and store communications. This can be in malicious form ([spyware](#)) or in the form of too detailed logs that are shared across the network (for performance improvement purposes). It is critical for the enterprise to assess the type of information captured, and ensure that critical information is not leaving the enterprise border unauthorised. As applications are the ones initiating the security setup of the communication channel, they can capture data before it is encrypted. To avoid surprises, choose a reputable communications app vendor like [Whisper](#)

[Systems](#) , [Threema](#) and [Proton-Mail](#).

• The Network

Fundamentally the network (whether mobile or fixed) does not play any role in security assuming the communications application creates a secure tunnel / [Virtual Private Network](#) between the communicating end-points. It is useful however to note that 2G/3G mobile networks employ encryption algorithms that are relatively easy to crack, and that 4G suffers from the same IP security issues as any other IP network. Applications should therefore not trust the network. At the same time, as the path between end-points is unknown, it is also important that any encryption employed by applications, caters for changing network conditions in a way that does not jeopardise user experience. A great example of how this can be done is [SQR Systems](#) who have developed particular algorithms to enable secure, adaptive voice and video communications.

• The Cloud

Not all communications are real-time and most enterprise collaboration use cases require persistent sessions e.g. to store interim work results and allow teamwork to continue across multiple devices at a later stage. For such use cases (collaborative document editing, document archiving, document exchange, ...) it is important that files are encrypted before they are stored in the cloud. Equally important: the cloud storage service should have no method to decrypt such documents without the user's involvement. This is known as a zero-knowledge cloud storage service. [Tresorit](#) is hereby our favorite when compared to other [similar services](#).

• The Communicating Parties

Any of the precautions above is rendered useless when the humans involved in communications do not live and breathe a security culture. For example plugging [memory sticks](#) (see minute 8:31) of unknown origin to PCs and / or clicking on dubious links within emails is a sure way to provide a 3rd party direct

access and control over the OS. Therefore end-user education is key to a successful communications security strategy.

In summary:

Understanding the role of the individual components in secure communications - device, firmware, OS, applications, network, cloud, communicating parties - is key to developing a successful communications security strategy. Fundamentally, it is all about deciding the level of trust towards individual components and the associated investment, risk and benefit for the enterprise. For example, a combination of secure devices, firmware, OS comes at the “cost” of less device choice. Trusting applications for secure communications may be reasonable, as long as the OS provider is trustworthy. Last, but surely not least: secure communications should not affect user experience negatively.

CREDITS & REFERENCES

For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Firmware attacks:
[Thunderstrike](#), [Dark Jedi](#)

Wikipedia: [Communications Security](#), [Boot Loader](#), [Spyware](#), [Virtual Private Network](#)

Companies: [SilentCircle](#), [Trustonic](#), [ARM](#), [Whisper Systems](#), [Threema](#), [ProtonMail](#)

The Guardian: [Amazon reverses 'backward' decision to remove encryption from Fire tablets](#)





THE ACHILLES HEEL OF AMAZON'S BUSINESS MODEL.

by Dr. Thomas Papanikolaou on December 14, 2015

Without a doubt, Amazon epitomizes the online retail store. Based on a globally uniform logistics and delivery platform, Amazon has managed to build a captivating online shopping and social experience, and generate 10's of billions of revenue per year. Looking at [The Technology behind the Evolution of Shopping](#) Amazon seems to possess the full enabling technology stack, highly scalable through its cloud-based execution model. In terms of user experience, it is still optimising and simplifying the instant buying process, further accelerating a shift in the way people buy.

It is in this relentless optimisation where the [Achilles heel](#) of Amazon's Business Model can be found.

Let us contrast and compare the shopping experience before and after Amazon's introduction of Social Commerce, as enabled by the Internet.

- Before Amazon, buying a consumer product in a retail shop

included talking with friends to get information and listen to their recommendations, going to one or more shops to get more information (in some cases: expert advice) and touch and feel the product, and finally purchase the product from one of the shops visited. A physical retail experience, with a mandatory face-to-face social aspect.

- After Amazon, consumers would check the Internet to get upfront information and Amazon to read recommendations from people that were almost always strangers to them. They would still visit one or more shops that had the product in display to touch and feel the product, but would return to Amazon and buy online at the best possible price. An online retail experience, with a supporting social aspect.

In the world after Amazon, small and medium businesses lost out / closed down, as they carried the cost for displaying the product (location and people expenditure) but did not earn a share of the

revenue when it was purchased online. Amazon won.

Large businesses reacted by going online, trying to regain the pole position in the online product search, and hoping to recapture the consumer with the best possible price. A heavy investment that showed some early success. The author believes that in the longer-term Amazon will win here as well, due to substantially lower operating costs.

But can Amazon's online retail model grow in a world without physical retail?

To answer this question, think of a wedding ring, a musical instrument, a bike, a lamp, a chair, a camera, ... or anything that has to do with a special moment in life, a personal preference, a hobby, It would be fair to claim that touching and feeling any such product before purchase is an integral, even mandatory, part of the consumer buying process.

Therefore, assuming existing technology and Amazon's current approach to market, the answer is that Amazon needs physical retail to flourish in order for Amazon to grow. Physical retail covers the missing and necessary ingredient in Amazon's online business model.

This dependency on the physical retail experience, is the Achilles heel of the Amazon's Business Model. Amazon cannot currently move full speed with its business model execution without more physical retail businesses closing down, and creating a discontinuity in user experience. In other words, the more successful Amazon is, the less physical retail there is, and the more consumers will hesitate to buy something they have never seen and touched before. In that context, it is not surprising news [that Amazon is opening its first physical bookstore](#) . Expect more such physical shops in more product categories to come.

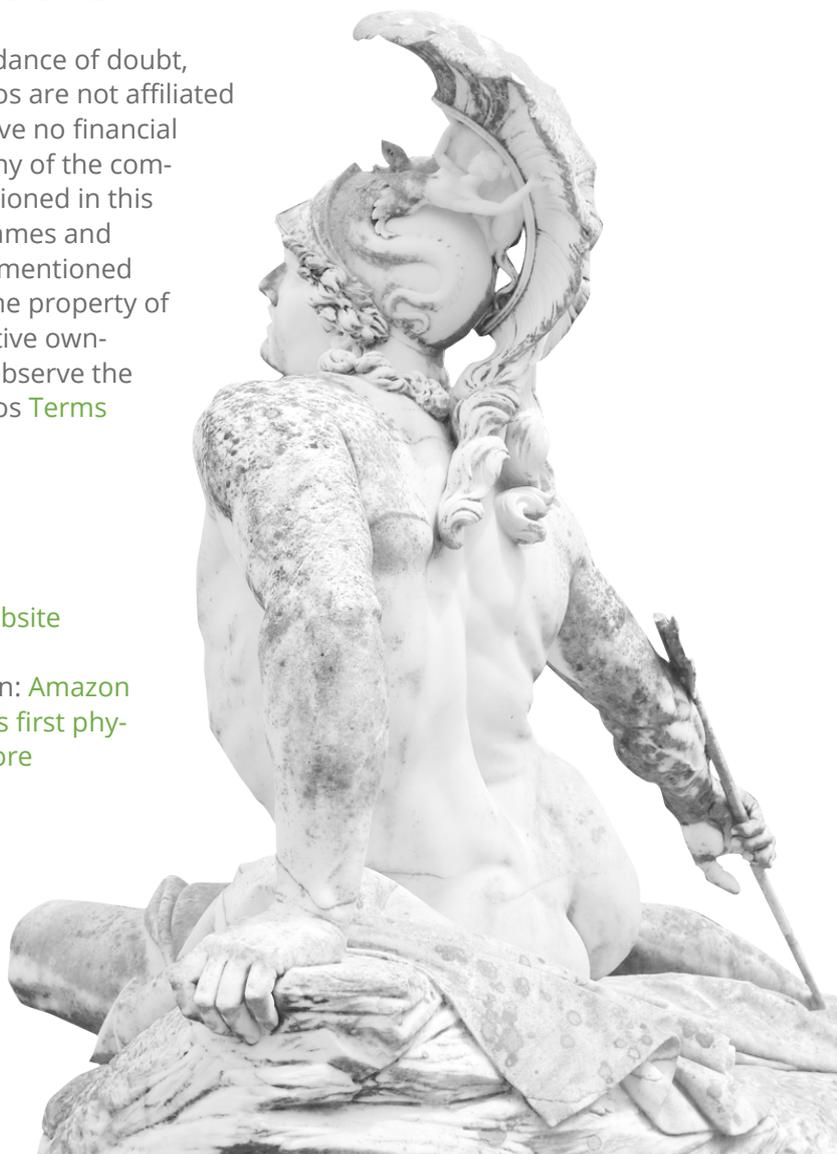
CREDITS & REFERENCES

For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Wikipedia: [Achilles heel](#)

Amazon: [Website](#)

The Guardian: [Amazon is opening its first physical bookstore](#)





A SIMPLE MODEL FOR SALES SUCCESS.

by Dr. Thomas Papanikolaou on March 30, 2015

We live in a connected world. Easy access to information, human capital, and production facilities means that “anyone” can replicate a product, service or delivery process. In that context, sales models that are based on presenting and arguing for “unique” value are either failing or, in the best case, challenged to deliver results. In this article we present an alternative sales model that defines the uniqueness of what is offered to a customer in terms of the company's identity: its purpose, its core values, and the sum of its employees who live and breathe those values towards customers. Focusing on the company's identity, rather than what a company does and how it does it, results in a simple and highly effective framework for sales success, that is universally applicable and hard to imitate.

PURPOSE

From our experience in advising customers during their buying processes, we know that customers have a natural knowledge ad-

vantage over sales people. This is due to their own business competence as well as the plethora of similar offerings and propositions put forward to them. After all, repetition is the mother of learning and customers are constantly invited to view solutions from several angles. For sellers, this means that Unique Selling Points (USPs) tend to evaporate in early discussions. Without USPs, sales propositions degenerate to commodities and risk to be judged solely on price.

Still, there are companies that despite this context do really well. Their products, albeit similar, are loved and admired and it seems as if they owned a secret that makes them immune to commoditisation. Simon Sinek revealed the difference between companies that are liked and companies that are loved, as the latter's ability to connect on an emotional level with their customers. Sinek's key insight is that the **purpose, cause, or belief** that inspires a company and its people to do what they do, makes the difference in achiev-

ing over-proportional business success. In other words: when all proposals put forward to a customer look similar, the customer's decision criteria are augmented with intangible aspects. Why you do what you do, becomes more important than what you do, and how you do it.



INTEGRITY

Before anything can be bought, customers have to run internal processes to get a formulation of the benefit they require, get organisational alignment and seek allocation of funds. It is only when all those prerequisites are in place that a search for a solution provider can begin. It has been claimed that engaging in that late phase of the buying process provides companies with access to only 7% of the actual customer opportunities. In other words: however good a company's sales methodology, the late engagement will by definition yield poor results.

Consequently, for a company to achieve sales success (reach the 93% of opportunities) it needs to engage in **Buying Facilitation** first i.e. helping customers "manage their behind-the-scenes, non-solution-related change management issues". This requires an existing customer relationship based on trust. Our experience shows that such a relationship can only be established by demonstrating a genuine advisory engagement style which does not define a purchase

as the only successful result. Sharon Drew Morgen calls this way of companies becoming a trusted partner to their customers **Selling with Integrity**.

Selling with Integrity means putting the customer's interests first and accepting that the **Buying Facilitation** process may result in solution options that either negate the need for a purchase from the customer (for example, the customer can achieve a required benefit with internal resources), or a solution that cannot be delivered by the company. Selling with Integrity also means a company taking the decision to invest in a long-term partnership with its customers.

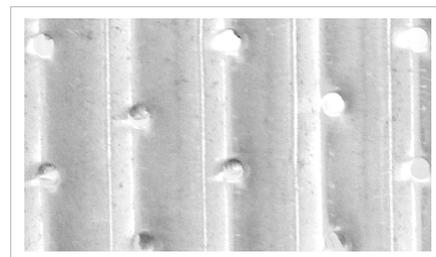
TRUST

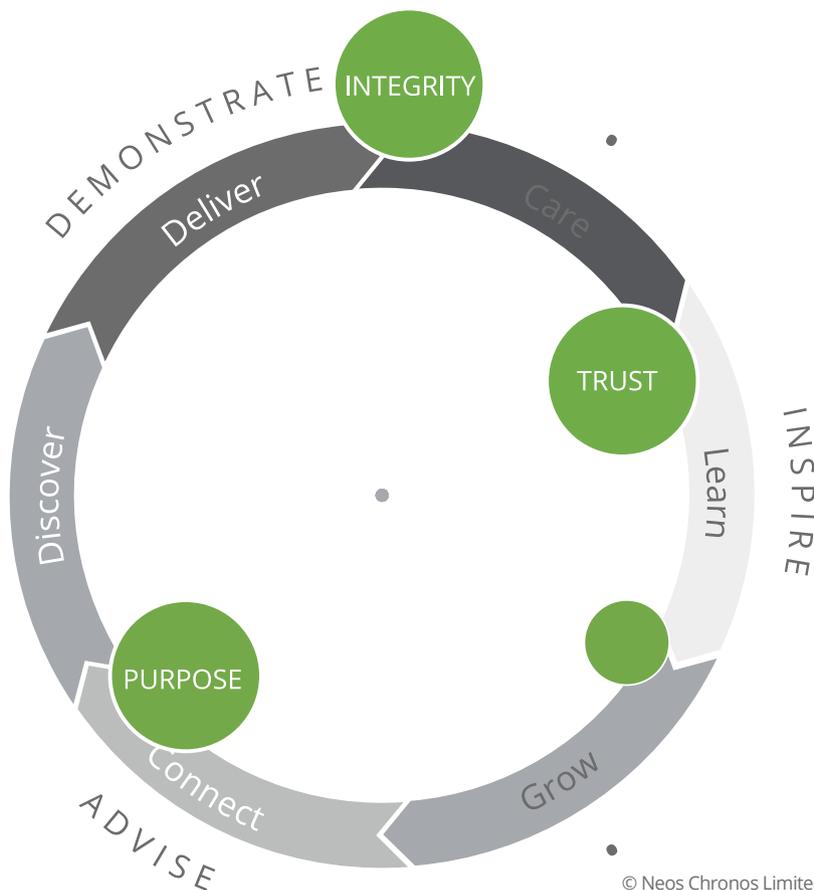
It is our experience that the genuine interest to deliver the best possible outcome for the customer is rewarded with trust and increased access to opportunities a company would have never had access to otherwise. This increases the chances of buying facilitation resulting in customer purchases. Therefore sales success cannot

be separated from successful execution and delivery of the jointly identified benefits. In particular after delivery, the company's sales success depends on providing continuous care to realise augmented benefits for both customer and the company. It is when the planned benefits are delivered and continuously enhanced over time that the customer and the company can learn and grow together.

NEOS CHRONOS

If you have worked with us you already know: the Neos Chronos Advisory Services Model is based on the principles illustrated above. Our company's purpose and values are entrenched into our culture and ways of working and underpin our commitment towards our customer's success.





shape the next steps and strategic view. We will always tell you the truth as we see it and will continuously demonstrate a can-do, “always curious, always learning” attitude to deliver creative, results-focused solutions. Our way of working: Advise, Demonstrate, Inspire. Our commitment: caring for our customer’s success.

CREDITS & REFERENCES

The graphics for this article were created by our designers at [RunnyMarmalade](#). For the avoidance of doubt, Neos Chronos are not affiliated with, and have no financial interest in any of the companies mentioned in this article. All names and trademarks mentioned herein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

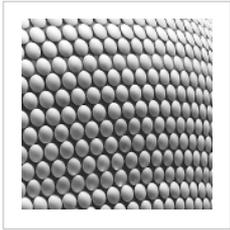
Simon Sinek: [How great leaders inspire action, Start With Why](#)

Sharon Drew Morgen: [Website, Buying Facilitation, Selling with Integrity](#)

Figure 1. Neos Chronos Advisory Services Model

We love making our customers successful. We believe our work and our customer’s business success will contribute to people’s happiness and society’s advancement.

You, as our customer, can expect our partners and associates to be dedicated to your success and act with respect and the highest level of professional integrity. As members of your team, you can expect us to exhibit a hands-on approach to drive tactical execution, and a big-picture mindset and sharing attitude to help you



HOW TO SCALE A LEAN START-UP.

by Dr. Thomas Papanikolaou on March 9, 2015

Entrepreneurs are known for their desire to always search for new ideas, customers and business models. Over the last years a number of methodologies have been developed to help and support this search. In this article, we discuss how to apply **Lean Start-Up** principles for a purpose they were not initially designed for: moving a company out of start-up mode and scaling into full execution.

THE LEAN START-UP IN A NUT-SHELL

The **Lean Start-Up** methodology has captured and documented the essence of the entrepreneurial search for a sustainable business model. It is rigorous, works in

practice, and its principles can be applied in a broad context. Here is a summary (for a more detailed description please see the article by **Steve Blank** on HBR):

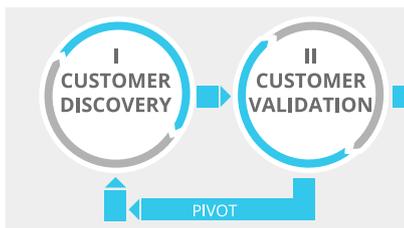
- **Business Model Search**
Instead of detailing a Business Plan, entrepreneurs use a **Business Model Canvas** to document their hypotheses and assumptions on how the company creates value in a sustainable manner.
- **Customer Development**
Instead of a building a product and then testing it with customers, entrepreneurs “get out of the building” and test their hypotheses and assumptions with potential customers. The focus

is to reliably identify customer needs and pivot / change direction before costly investments are made.

- **Minimum Viable Product**
Hand in hand with Customer Development, entrepreneurs use agile development techniques to incrementally create “light” prototypes and solutions that can be used to verify their assumptions with customers. The result is an incrementally developed product, that contains only the critical (validated) features.

“During customer development, a start-up searches for a business model that works. If customer feedback reveals that its business hypotheses are wrong, it either revises them or pivots to new hypotheses. Once a model is proven, the start-up starts executing, building a formal organization. Each stage of customer development is iterative: a start-up will probably fail several times before finding the right approach” - Steve Blank

SEARCH



EXECUTION

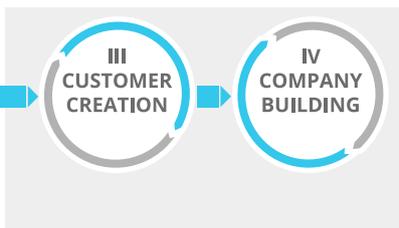


Figure 1. Lean Start-Up Lifecycle

SCALING A LEAN START-UP

According to [Steve Blank](#), while there is plenty of literature to help entrepreneurs figure out how to search for a business model (as well as Incubators and Accelerators to give practice), there are few resources from which an entrepreneur can learn how to [guide a company through the execution phase](#). Thankfully, this is no reason to despair. In the following sections we will show how entrepreneurs can re-purpose and use [Lean Start-Up](#) principles to help moving a company out of start-up mode and scaling into full execution:

- From Business Model Search to Operating Model Search
Entrepreneurs use a Customer Experience & Lifecycle Definition to capture the assumptions and hypotheses on how the company delivers the pre-, in- and post-sales customer experience, as enabled by the Minimum Viable Product (an example of such a Definition can be provided on [request](#)).

- From Customer Development to Customer-Driven Organisational Development
Entrepreneurs “get out of the building” and test their hypotheses and assumptions on Customer Experience & Lifecycle delivery with potential customers. Based on validated feedback, they create an organisational structure that is optimised to deliver on each part of the Customer Experience & Lifecycle. It is important to note that creating an appropriate organisational structure requires specific organisational skills that might be not available among the founding team. Therefore, this phase is often used as an inflection point by start-up boards to re-assess and strengthen the founding team with any missing organisational competence. Finally, successful companies view Customer-Driven Organisational Development as a continuous process to [adjust and improve](#) the company’s organisational structure.

- From Minimum Viable Product to Minimum Viable Organisational Blueprint

Using appropriate techniques (e.g. [Analytics](#)) entrepreneurs review and refine each part of the delivery of the Customer Experience & Lifecycle, and incrementally create a blueprint of an organisation that can scale predictably (by replication, or expansion of each functional unit) to deliver against a given sales volume. The key challenge hereby is that with increasing organisational size it is difficult to maintain focus: clarity of the common purpose, understanding of business model and dedication to customer needs. Experience shows that fewer functional units, a flat organisational hierarchy, ... can help address these issues by promoting speed, simplicity and trust.



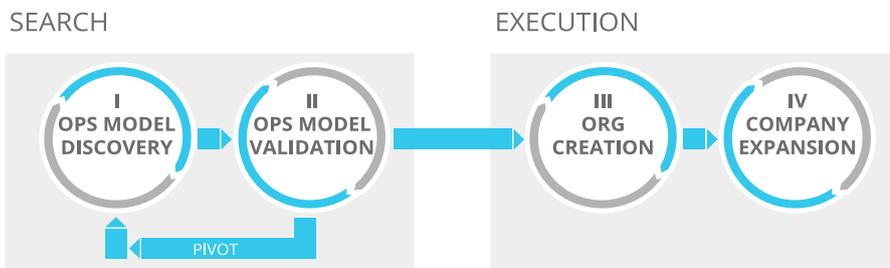


Figure 2. Scaling a Lean Start-Up

CREDITS & REFERENCES

The graphics in this article are based on graphics from the [HBR.org](https://hbr.org) site. The graphics were adapted for this article by our designers at [RunnyMarmalade](https://runnymarmalade.com) to reflect the extended method proposed. All names and trademarks mentioned therein are the property of their respective owners. Please observe the Neos Chronos [Terms of Use](#).

Lean Start-Up: [Website](#), [Wiki](#)

Steve Blank: [Website](#), [Why the Lean Start-Up Changes Everything](#), [What Do I Do Now? The Startup Lifecycle](#)

Free Download: [Business Model Canvas](#)

"In parallel to customer development, a start-up searches for an operating model that can scale predictably to deliver against a given sales volume. Starting from an initial organisation setup, the start-up seeks to continuously adjust its structure to deliver optimally against the Customer Experience & Lifecycle Definition. Once an operating model is proven, the start-up is ready to scale its organisation at a higher speed. This is a continuous process: a start-up will probably adjust its operating model several times over its lifetime to address changing Customer Experience & Lifecycle Definitions" - Neos Chronos

In summary:

In this insights article we described how [Lean Start-Up](#) principles can be re-purposed and applied for moving a company out of start-up mode and scaling into full execution. The application of the method presented may require specific organisational skills that might be not available among the founding team. In such case, it is advisable to acquire missing organisational competence.





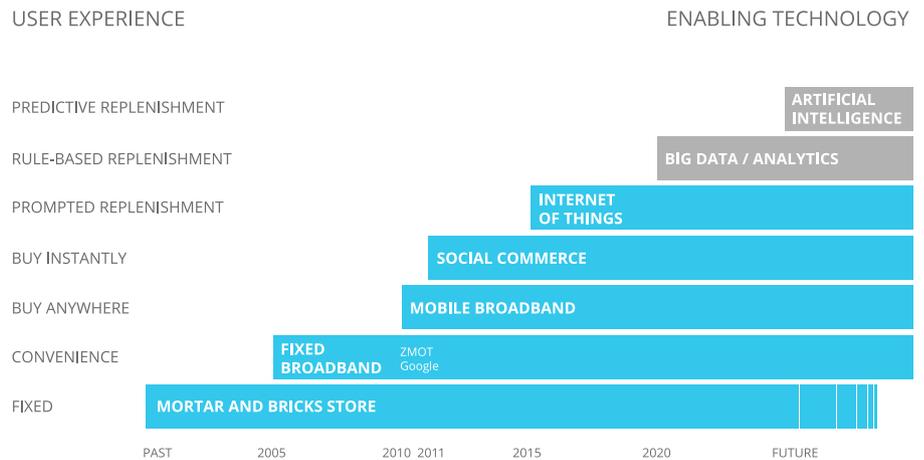
THE TECHNOLOGY BEHIND THE EVOLUTION OF SHOPPING.

by Dr. Thomas Papanikolaou on February 12, 2015

Understanding what makes life simpler, easier and better for users (be it persons or businesses) is the prerequisite to create compelling and engaging user experiences for them. Starting from the user's daily life and journey offers a natural way to identify user tasks whose execution can be improved. The inherent clarity of this approach makes it easier to choose the most appropriate technology to create improvements to user experience. As an example, we look at how shopping experience evolved and how technology has enabled this evolution.

Up to 2005, purchasing in-store was the primary means of acquiring goods. With the introduction of fixed broadband, shopping became more convenient as technology enabled shoppers to research and purchase online while sitting in front of a computer. Mobile broadband removed the attachment to the computer, leveraging the mobility of devices connected to mobile networks. Subsequently, social networks improved shopping confidence and speed

THE EVOLUTION OF SHOPPING



© 2015 Neos Chronos Limited . <http://neoschronos.com> . based on a presentation by Saatchi & Saatchi X, with permission.

by introducing facilities such as community ratings and one-click purchase. Since fairly recently, it is even possible for connected devices e.g. fridges to perform purchases after asking for and receiving the user's permission.

Moving forward, there are many possible paths for the shopping experience that may or may not materialise despite the fact that

enabling technology might be readily available. Our picture shows one such possible path (in gray color).

- **Big Data and Analytics** could be used to enable connected devices (intelligent fridges) perform purchases based on rules defined by the user. In rule-based replenishment, the technology matches user preferences to in-

formation computed from historical patterns to implement rules like “always buy vegetables from local producers (rule), based on our usual seasonal consumption (big data, analytics), even if the price is 10% higher than the market average (rule, big data, analytics)”.

• **Artificial intelligence** could be employed to enable use cases that are more interconnected with our life. For example, despite existing rules, an intelligent fridge could “independently” order more drinks, when a party is arranged on the user’s connected device / calendar (predictive replenishment).

Whether the future shopping experience we describe will materialise, will most likely depend on the ability for users to “program” such rules simply and intuitively, rather than the availability of technology. This brings us to this article’s key learning:

For an experience to be adopted by users it needs to make life simpler, easier, better. Technology is just an enabler.

CREDITS & REFERENCES

The Evolution of Shopping graphic is based on a graphic from a public presentation by **Rachelle Headland**, Managing Director at **Saatchi & Saatchi X - London** who generously gave us permission to use it for our own work. Graphics were adapted for this article by our designers at **RunnyMarmalade**. All names and trademarks mentioned therein are the property of their respective owners. Please observe the Neos Chronos **Terms of Use**.

Wikipedia: **Artificial intelligence**





THE PRACTICAL GUIDE TO ENTERPRISE WI-FI CALLING.

by Dr. Thomas Papanikolaou on February 03, 2015

Wi-Fi Calling is expected to find wide deployment beyond the US over the course of 2015. Beside consumers, enterprises have a lot to benefit from the new communication access channel. In this article we summarise how enterprises should approach Wi-Fi Calling, compare native to application-based approaches, and provide practical advice on how to choose the right implementation for small, medium and large enterprises.

ENTERPRISE SIZE

The size of your enterprise will most likely determine the type of **Wi-Fi Calling** approach that makes sense for you. For example, if you are just starting out, existing and battle-tested tools like **Skype**, **WeChat**, etc. will be more than sufficient. Once agreed as the default tool to be used by everyone (this is where size matters) such applications provide great functionality (voice/video call, messaging, presence, file transfer) and experience (robust and bandwidth-saving **Co-decs**). For a very low investment

small enterprises and start-ups can deploy application-based **Wi-Fi Calling** across all common **Mobile Operating Systems**.

COMMUNICATIONS COST

It is a different story at the point where enterprises need to provide a managed / controlled communications experience. This could be, for example, because the enterprise grows that much, that deploying its own communications infrastructure (e.g. a **PBX**) and monitoring communications cost has a positive business case. Hereby two options (managed on-premise versus outsourced cloud infrastructure) become available. The tools that worked well for small enterprises, might now expose issues as manageability and financial integration become important. This is usually the case in medium-size enterprises.

USER EXPERIENCE

With the introduction of the iPhone 6, enterprises can choose

to have Wi-Fi calling usable via the native phone dialer. This is not new. Native **Wi-Fi Calling** has been a functionality long available in the US through various mobile and fixed network operators across various devices and modified versions of **Mobile Operating Systems**). The novelty is in the acknowledgement from a major device manufacturer that **Wi-Fi Calling** belongs into the **Mobile Operating System**, as an intrinsic part of the user experience.

Imagine, for example, a mobile operator that can offer native **Wi-Fi Calling**, with smooth handover between access networks and all enterprise functionality of a cloud-PBX. Such a proposition provides productivity gains that are hard to beat with any application-based approach. So user experience is a critical factor to consider because of its positive business case impact.

INTEGRATION REQUIREMENTS

There is however a further factor that will ultimately decide wheth-

er an enterprise should choose the native **Wi-Fi Calling** approach versus the application-based one, namely the depth of integration required with existing enterprise processes. This is the case with large enterprises. Examples of such integration include the ability to place video calls from a mobile into an enterprise-premises video conferencing system, and complying to regulatory requirements such a call recording for financial institutions. Here a configurable application-based **Wi-Fi Calling** approach makes far more sense than native **Wi-Fi Calling**.

WHAT NEXT

The four factors listed above, form a solid decision guide for choosing the right **Wi-Fi Calling** deployment for your enterprise. Admittedly, there is no solution that fits all requirements. There is however an optimal solution for your enterprise size, your budget, the productivity gains you aim to achieve, and the context within which you operate. We hope the examples we listed above will help you find it.

Neos Chronos have published an excerpt of relevant research performed last year in the **Wi-Fi Calling market overview** article. For more information on how our **advisory services** could help you, please **contact us** to arrange an introductory meeting.

CREDITS & REFERENCES

All names and trademarks mentioned therein are the property of their respective owners. Please observe the Neos Chronos **Terms of Use**.

Application-based Wi-Fi Calling:
Skype, WeChat

Wikipedia: **Codec, PBX, Mobile Operating Systems**





FEATURED SERVICE: LEAN CANVAS WORKSHOP

Starting up?

Get help to accelerate your entrepreneurial journey. Work together with an expert advisor to capture your idea and business model. Discuss questions specific and relevant to your idea. Benefit from direct access to the advisor's business experience to inform your decisions during and after the workshop. All of this within a confidential and supportive setting.

STARTUP EDITION < 2 YEARS OLD



LEAN CANVAS WORKSHOP
ONLINE, SKYPE VIDEO
1 - 2 PARTICIPANTS
1 HOUR SUPPORT
NO EXPENSES
PAY WITH PAYPAL

BUSINESS EDITION 2+ YEARS OLD



LEAN CANVAS WORKSHOP
ONLINE, SKYPE VIDEO
1 - 2 PARTICIPANTS
2 HOURS SUPPORT
NO EXPENSES
PAYPAL OR INVOICE

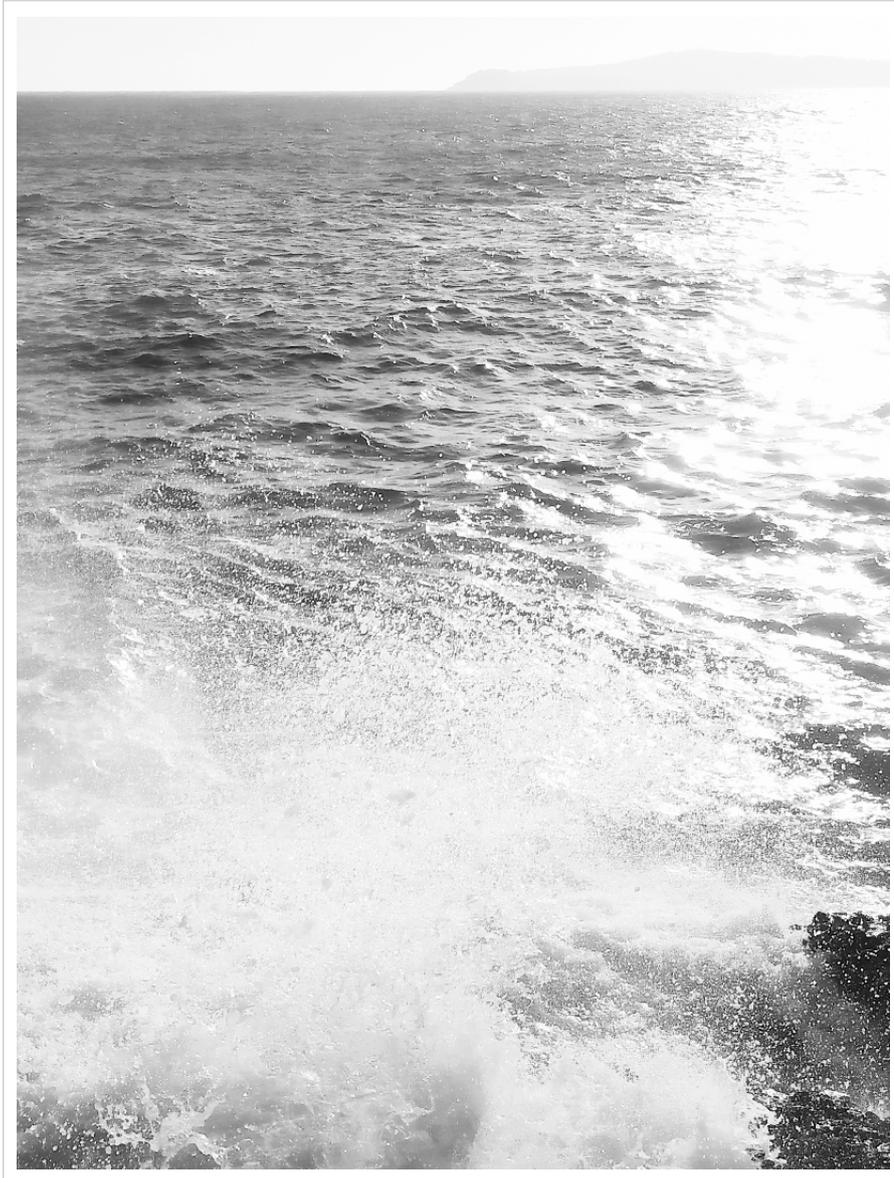
ENTERPRISE EDITION 2+ YEARS OLD



LEAN CANVAS WORKSHOP
ON-PREMISE
1 - 6 PARTICIPANTS
4 HOURS SUPPORT
EXPENSES (*)
PAY ON INVOICE

[LEARN MORE](#)

(*) The Expenses for on-premise delivery for the Enterprise Edition are charged in addition to the price shown on our website. Details will be provided upfront.



We thank you for your support and hope for a continuing successful cooperation.

The Neos Chronos Team

INSIGHTS 2016 - 2015

Design: runnymarmalade.com
Photography: Anja Trampert

Subscribe at
neoschronos.com/insights

© 2017 - All rights reserved.