THE BETA CITY

THE CITY AS A BUSINESS MATCHMAKER AND TESTING GROUND

INNOVATIONS CASE NARRATIVE: ANTWERP, BELGIUM

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Antwerp, Belgium was the winner of the 2015 Startup Nations Award for Local Policy Leadership. Through our work, we have come to the conclusion that nurturing an entrepreneurial mindset in a city has a very healthy effect on economy and society.

With industrialization and the subsequent rise of the service economy, the 20th century witnessed the introduction of a new center of gravity—the corporation. Inventions were no longer strictly the domain of science and academia. Corporations became hubs and drivers of innovation and have been instrumental in virtually all technological breakthroughs since the 1950s.[1] These advancements led to ever more generations of consumer products and electronics.

The rise of the corporation over this period also had a tremendous social impact. With corporate dominance came corporate life: the way we defined work, the way we defined time off, the educational choices we made, the roles we attributed to youngsters and to the elderly, the way we balanced life, work, family, and leisure. In short, almost every aspect of life was fundamentally influenced by the way people functioned within the corporate structure.

This gravitational pull has culminated today in the global dominance of a small number of very large technology companies, such as Alphabet (Google), Apple, Microsoft, and Facebook. With a combined stock value four times that of the four largest firms just 20 years ago, these companies are the most valuable in the world.[2] Whether it concerns new products, new ventures, new kinds of jobs or job titles, we tend to observe and follow their every move.

NOT ONLY INDUSTRIES GET DISRUPTED

However, this 20th-century corporate logic ends there, and it ends abruptly. The young

21st century has already seen wave after wave of change: cloud storage, mobile, the Internet of Things. The very technologies that sprang from corporate Silicon Valley have given birth to a new business culture that is establishing entirely new standards in what we call the age of disruption.

Information technology, or IT, has evolved from being just one of many industries to become a paramount factor in innovation. Digital technology in the age of disruption has fundamentally altered advertising, media, retail, travel, and, more recently, banking, insurance, health care, logistics, human resources, consulting, education, and government services.[3]

If we zoom in to consider this disruption from a macroeconomic perspective, we find one common denominator across the new business landscape: while the underlying technologies hail from large academic or corporate innovation centers, disruption thrives in individual cells and among select groups of people. This is largely because small companies find it easier to exploit the possibilities of swift technological change.[4]

The digital revolution has dramatically lowered the cost of technology and product development, which in turn empowers small companies to develop new products and new platforms, and to alter the dominant business model. In fact, a whole new entrepreneurial generation is looking to do business with one goal in mind: to create value in the new digital world where a few Goliaths fear a multitude of Davids known as startups.

Startups, spinoffs, spinouts, scaleups—although these terms have been around for ages, they're now in the spotlight across the globe. Perhaps due to the lack of heavy hierarchical structures and corporate agendas, the founders and employees of these new firms sport a highly creative mindset and an ability to think outside the box. While they implement scalable new business models based on state-of-the-art technologies, the tools of their trade are simple: a couple of laptops and basic IT skills.

These small emerging companies—let's call them startups—behave differently on many levels. They tend to have a slight structure, often starting out as projects, and avoid classic organizational hierarchies.[5] Team chemistry is a critical asset and is often regarded as more important than the choice of what product to develop. These companies' endeavors have less to do with pursuing a passion than with the opportunities available in a particular sector, and are increasingly the result of a deliberate business-building process within a university or private incubator. Founders and team members are totally committed to their companies, making themselves available at all times. They often retreat to bars during

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work time, where they contemplate company and other related issues. This is not a case of laissez-faire; it is simply a different way of doing business, sparked by the younger generation's disregard for formal structures.[6]

In media mentions of startups, the cliché of the 20-something male developer often appears to be true, but the startup hype has inspired other businesses and demographic groups to adopt this new culture. Large companies are now opening their own incubators, sponsoring startups, and supporting innovation camps and "hackathons." Sometimes they even house small groups of staff members in the immediate vicinity of creative hubs in the hope that the startup way of life might rub off on their own employees.

However, it's no longer just industries that are being disrupted but the whole economic ecosystem. We are witnesses to a paradigm shift in which the formal corporate society is making way for a complex informal network society that consists of these small cells. This paradigm includes the belief that anyone of any age can do business, regardless of his or her academic background, thanks largely to the immediate availability of affordable digital technology.

ANTWERP: THE CITY AS A BUSINESS FRAMEWORK

From a government perspective, the natural question is what the ideal environment is for this emerging business culture to thrive.

Enter the city.

From our experience in Antwerp, Belgium, we are convinced that cities are the ideal breeding ground for cultivating startups and inducing a startup mentality in different groups of people. Cities essentially function as dense networks of cells, and by offering these cells the right "ingredients" a city can create a thriving environment for entrepreneurship. In fact, we are convinced that

local governments can turn a city into a startup haven, and Antwerp is proof of this idea. We will offer examples of how Antwerp—known for its diamond trade, port activities, and one of the world's largest petrochemical clusters—has cultivated its startup culture and entrepreneurial networks.

With leading cities such as London, Amsterdam, and Paris within a 200-mile radius, Antwerp was not exactly the go-to place for innovative business development or smart city activities until recently. In fact, startups and innovation were hard to find in our city, and other Belgian cities such as Brussels and Ghent were well ahead in providing a hospitable startup atmosphere and claiming a place in the second tier of innovative cities in Europe.

The scales started to shift in 2013, due to the media buzz about the successful introduction of two privately owned incubators in Antwerp's city center. The new city council that came to power at the same time renewed local interest in economic development, and it formed a small team within the public service administration called Antwerp Startup City. This group was charged with stimulating and nurturing entrepreneurial activity within the city. The approach was simple yet unique: (1) facilitate whatever initiatives may spring from the private sector in the Benelux region; (2) promote their activities to the broader business community; and (3) fill in the gaps wherever necessary.

This is an entirely different approach to the usual workflow of local governments, which tend to meticulously plan and map out future activities without much flexibility. Moreover, most local governments set out to own the projects, often ignoring more effective and cost-efficient initiatives.

Considerable time and effort were invested to help Antwerp Startup City become a knowledgeable and supportive partner to local entrepreneurs and, more importantly,

to its becoming a business matchmaking platform. When a lot of different initiatives arise and many small companies seek to do business, they want an unbiased, credible partner. The city's startup team happily filled that role, carefully anticipating and monitoring any competition issues startups might face in the market. The expertise and objectivity of the city's team was immediately recognized within the entrepreneurial landscape, and its endorsement of a project became a valuable asset. The city administration unknowingly had become a matchmaker and kingmaker amidst a complex informal network of small cells fueled by dense urban activity. The city government essentially functioned as the main hub that connected the small and big dots.

THE STARTUP PYRAMID: STIMULATING ENTREPRENEURSHIP, INCUBATION, AND GROWTH

Historically, incubators in Europe are government owned, and their aim is to capitalize on academic intellectual property. They are usually built in anonymous business parks on the outskirts of a city, reachable only via highways.

Antwerp's privately owned incubators have a different focus. They are designed to form startup teams and produce working prototypes in a short period of time. The large companies that sponsor these programs are actively involved by making investments and offering business expertise. This creates a win-win scenario: startups have access to resources and potential first customers, while corporations gain access to entrepreneurial talent and a wide array of new disruptive products.

Antwerp's incubators are located near the city's fashion district, university campuses, and cultural and nightlife facilities, and thus are able to tap into the creative scene in the city center. Many incubator employees in the Antwerp ecosystem also live close by,

which reinforces the vibrant atmosphere and makes the need to reach the incubators by car largely irrelevant. Ann Mettler, former executive director of the Lisbon Council, noted that "all the cool companies in Silicon Valley are moving up from the valley into the center of San Francisco. There is a similar evolution in Europe."[7] Antwerp is a striking example of this movement.

Although incubators usually compete for both talent and venture capital, the city of Antwerp emphasizes that some form of cooperation is necessary between incubators. We have come to understand that the success of incubators in Antwerp depends on two primary factors: (1) Is there a great enough influx of entrepreneurs, startup staff, and quality business ideas? (2) Do we adequately nurture and scale our top startup successes?

We also encourage consistent involvement from the academic community and continued government support to ensure our startups' future success. In 2014, the city formalized the main principles and framework for the development of Antwerp Startup City in a memorandum of understanding. It included three principles that form a pyramid to demonstrate how Antwerp Startup City cultivates the ecosystem:

1. **Stimulating entrepreneurship.** The bottom of the pyramid forms the foundation where incubators, government, and universities cooperate to promote Antwerp as a creative startup haven—a goal that was not recognized until recently.

2. **Incubation**. The center of the pyramid represents the playing field of privately owned incubators and the role they play. Everyone is free to develop their own activities and attract whatever startup and personnel they like.

3. **Growth**. At the top of the pyramid, incubators, government, and universities coop-

erate in housing, promoting, and attracting venture capital to help scale and grow Antwerp's startup successes.

The broader the base of this pyramid, the higher the top, and the city laid a foundation for stimulating the ecosystem by investing in student entrepreneurship programs. It began by increasing the number of student entrepreneurs through awareness campaigns and the launch of TakeOffAntwerp, a pre-incubator that enabled students at all universities and colleges to explore their entrepreneurial dreams. With only 1 percent of students currently starting a business during or just after their academic career, we still have a long way to go. Leading cities such as Amsterdam currently have three times the number of entrepreneurs flowing into their ecosystems as Antwerp does. Investing in students was important to building interest in entrepreneurship and planting seeds to grow the startup culture.

However, Antwerp does not want to reinforce the cliché of the young entrepreneur, and students are just one demographic the city serves. If cities want to thrive in the future they must unlock the innovation potential of all their citizens, not just the young ones. To do this Antwerp focuses on diversifying the base and engaging other populations. Every aspiring entrepreneur now can turn to the city for advice on all kinds of issues, from regulatory problems to one-on-one business counseling. The city serves as a portal to its dozens of private and governmental partners in business incubation and business coaching, the result being that our incubator ecosystem sports a high number of seasoned professionals, many of whom have pivoted to the startup ecosystem after long corporate careers. Matching these people with younger tech enthusiasts often makes for a successful startup mix. Early data suggest that these startups generate the most revenue in their early stages and are most successful in terms of attracting venture capital investments.

So what do we do next with our startup successes? At the top of the pyramid we encounter a different set of challenges. The city center location, for example, presents one disadvantage: office rent is high and the real estate market is not yet accustomed to the specific demands of startups and growing companies. As a result, many of these companies scatter to the outskirts of the city or to locations abroad.

In response, the city has focused on redevelopment, turning old administrative buildings into affordable office space to anchor growth-stage companies. These buildings are available to startups that are graduating from incubators or coming to Antwerp in a later stage of their development. Contracts are flexible, with a three-year maximum. One example, the two-building site of StartupVillage, offers 3,000 square meters of growth space within walking distance of the evolving incubator ecosystem in the city center. A committee of city officials and serial entrepreneurs screens and selects the tech companies by considering their sector profile and potential scalability.

Growth-stage companies in Western Europe often lack the global ambition displayed by their U.S. and Asian counterparts. Therefore, the city emphasizes projects that involve internationalization, as international business contacts provide a firsthand market benchmark and individual companies grow much more confident in terms of early sales, too. We encourage growth-stage companies to take their business abroad as soon as possible in order to gain a better understanding of the global marketplace and to lay the foundation for future sales. We coach startups on sales events being held worldwide, organize trade missions led by the mayor, and partner with other startup organizations, such as Startups.be and Flanders Investment and Trade. This outward thinking is matched by local promotional activities. For example, the city monitors the activity of the world's top venture capitalists and is an eager host of tech-investor tours and other investment semi-

nars, where venture capitalists are matched with Antwerp's finest young tech companies. These activities are small-scale, highly business-oriented meetings that focus on closing investment-deals.

Within a mere three years, Antwerp has become a magnet for business incubation. Seven new incubation initiatives have opened in the city, a couple more are underway, and more than 200 startups have already sprung from these incubators. Our tallest office building—which houses 60 startups on 18 floors—is a testament to this renaissance. Last year, 22 digital startups in Belgium raised a million euros or more, up from just six in 2014. Eight of them are based in Antwerp.

THE BETA CITY

In this essay we have described how Antwerp evolved into a haven for startups and corporate incubators. We now offer some advice for cities that are contemplating growing a startup ecosystem. Two factors were key to Antwerp's international success: the vision of Antwerp as a digital enabling platform, and the city's size. These two components helped us create what we call a beta city—a city that stimulates and facilitates the development of highly innovative products and projects.[8]

The term beta refers to the digital world, where unfinished products are tested by a large number of potential users. The results give developers valuable data to help them refine the products and services they aim to generate. The new generation of digital products are interconnected, and every type of software and hardware has the potential to communicate with another. This phenomenon is known as the Internet of Things. Where hardware testing is involved, a physical infrastructure is needed. The beta city offers both infrastructure and a large number of users, which makes it possible to experiment with both business and city development led by the local government.

Antwerp is proud that it supports the start of new businesses by offering advice, expertise, and brick-and-mortar structures, but it has a great deal more to offer in terms of digital technology. Inspired by the concept of the beta city, Antwerp's digital content, web, and open sensor network are an ideal breeding ground for digital businesses, which of course need platforms to grow on. This kind of "virtual incubation"—using open digital infrastructures—is an essential part of the Antwerp Startup City program.

However, the number-one thing a government can do to help startups develop is to buy their products. Antwerp's Buy From Startups program provides developers and startups with a massive platform, a city operating system through which the city invites companies to develop new products on top of the existing digital infrastructure. The Antwerp operating system offers open data, open interfaces and software kits, and is open to any startup that sees an opportunity. Our approach is accessible to every potential user in the city—citizens, students, businesses, and visitors.

Since local governments have to comply with EU regulations and others that involve tendering, the city devised a compliant legal framework in which employees help startups administer their tendering.[9] More importantly, we offer large city IT projects that are divided into different parts, which allows multiple small companies to work in a more agile manner. The Buy From Startups program is equally beneficial for the city, as IT projects get delivered sooner and the city staff learns from the creative approaches used by startups. Since the program's launch in June 2015, more than one million euros have been spent on 23 projects through Buy From Startups; this number is expected to climb steeply in 2016.

Much as entrepreneurship programs provide new startups for our incubators, the city tries to promote the digital platform to other demographics. Apps from Antwerp, for instance, offers a series of events at

which city problems such as mobility, energy storage, or social inclusion are pitched to the public, urging them to come up with solutions. This is also a matchmaking platform where student developers, for instance, meet knowledgeable pensioners, and where solutions are funded and built by the city. This approach enables the entire community to participate in creating the city of the future while bridging multiple digital divides along the way. This remains a work in progress in Antwerp, but the initial experiences show it is working.

Antwerp certainly cannot outpace London, Berlin, and Paris as a tech capital, as it has only a half-million inhabitants, but the city's small size can be an advantage in terms of the beta city concept. Antwerp has that particular beta city quality: it is big enough to generate relevant data and small enough to quickly equip with state-of-the-art infrastructure. Combined with its diversity—the population includes at least 175 nationalities—creative atmosphere, and industrial port, Antwerp is a perfect location for digital experimentation.

Our goal in the beta city is to create added value using the new and existing city infrastructure. Within this framework, we continue to experiment and push the frontiers of what cities can do to promote an entrepreneurial culture. A new government-funded project called the City of Things, which offers a living lab for everything and everyone to do with the Internet of Things, is all about creating added value. This joint venture between the city of Antwerp, Flemish innovation institutes IMEC and iMinds, and a few leading telecommunications and tech companies converts the whole city into a massive testing ground for new smart city products.

The City of Things offers a citywide network of sensors and beacons, and a test panel with over 50.000 people willing to participate in the development of new mobile products. Startups that want to test a product or a piece of technology can freely

do so in Antwerp. It goes without saying that this dramatically lowers costs and improves the speed at which companies can "go-to-market." The City of Things, which is set to launch in the summer of 2016, will be Europe's largest urban living lab.

THRIVING CITIES CONNECT AND ENABLE SMALL CELLS

In the era of disruption, wave after wave of globalization and digitalization have put a strain on the Western European economy and society. Small emerging business cells are exploring opportunities in the wake of these rapid changes and creating value using the cost-efficient tools offered by digital technology. But due to their small size, they lack the business networks and credibility that eventually create sales and growth. Thriving cities can create opportunities for these emerging business cells. We believe that facilitating these cells, both startups and other projects, is the key to the future success of today's cities in terms of business development, smart city development, and citizen engagement.

In Antwerp we have tried and succeeded at this using a bottom-up approach, what we refer to as the startup pyramid. This simple idea and framework have activated the entrepreneurial potential of a large number of people, and by stimulating entrepreneurship among people of all ages and demographics we create a sufficient flow of projects into our incubator ecosystem. These privately owned programs have excelled in building the right teams for the right products and have brought in corporate expertise when needed. The result is a win-win scenario: startups have access to resources and potential first customers, while corporations gain access to a wide array of new disruptive products and entrepreneurial talent.

As successful as they might be, to build their businesses the top startups that graduate from these programs need to produce rev-

enue and platforms early on. This is where a facilitating government sets the tone[10]: TakeOffAntwerp, StartupVillage, the Buy From Startups program, Apps from Antwerp, and City of Things are all examples of what we offer in Antwerp, the beta city.

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6. Dorsey, J. R. Y-Size your Business: How Gen Y Employees Can Save you Money and Grow Your Business. Hoboken, NJ: Wiley, 2010.

. The Lisbon Council for Economic Competitiveness and Social Renewal is a Brussels-based think tank and policy network. Established in 2003 as a nonprofit, nonpartisan association, the group is dedicated to making a positive contribution through cutting-edge research and by engaging political leaders and the public at large in a constructive exchange about the economic and social challenges of the 21st century.

8. In Antwerp's view the beta city is one of considerable scale that harbors and actively stimulates experimentation, innovation, and the testing of new products in the fields of smart city and smart business. The term beta refers to the extensive testing phases that are inherent to software and hardware development.

9. Tendering is the process of choosing the best or cheapest company to supply goods or do a job by asking several companies to make offers. See http://dictionary.cambridge.org/us/dictionary/english/tendering.

10. The city of Antwerp was awarded the 2015 Startup Nations Award for Local Policy Leadership.