

## Globsec City Challenge 2018

# THE PIJOVA-ROCLA CITY CHALLENGE

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There are multiple pressing issues with Pijova-Rocla, but this essay will cover the city's economics, in particular its lack of appropriate jobs, which it considers to be the primary problem of the city. By resolving its employment issues, it provides conditions for sorting out the rest of the city's problems.

The city of Pijova-Rocla is an economic mess. It has an industrial past, evident in its suburban landscape, and it has managed to attract a number of service and tech companies through financial incentives. However, the city suffers from both low-skilled unemployment and a lack of high-skilled laborers for its new service sector jobs. This is the result of an incoherent economic plan and a badly-managed renovation strategy. While the previous mayor's renovation project managed to attract various startups, logistics and IT companies, he completely ignored the need to create low-skilled jobs for long-term residents or train the local youth for high-skilled jobs. Several new chain stores did manage to employ some local people, but they also forced some local shops out of business due to the increased competition, making many long-term residents unemployed.

Further exacerbating the situation is the gradual advance of automation into Pijova-Rocla's manufacturing jobs, which constitute over half of the city's total industry. As automation makes some low-skilled workers obsolete, increasing competition for low-income jobs will only add to an already dire employment situation. Furthermore, young people are not afforded many options for either education or appropriate work. As a result, many leave the city in pursuit of university studies or jobs.

Social mobility is limited. The impoverished locals lack the necessary training to compete for the new service and tech sector jobs, while a lack of low-paid jobs prevents most of them from being able to pay for their children's education outside of the city. "Many young people are attracted to antisocial behaviour" which is possibly connected to the lack of entry-level jobs and opportunities for higher education. The lack of higher education or appropriate jobs may also be a factor behind the city's "high crime rate and social problems". These barriers pressure talented young people into migrating out of the city in pursuit of university studies or meaningful employment.

On one side, we have a city center that is bustling with tech and service-sector startups, on the other, an impoverished suburban landscape that has nothing to offer for its youth. The renovation schemes of the past mayor have failed the long-term residents, and it has only worsened this conflict. Cheap land prices and other financial motives managed to attract a lot of small to medium enterprises (SMEs), but the measures that attracted them have also put a strain on the city's budget. Now that some industrial halls have been converted into offices, Pijova-Rocla has created a suitable environment for many service and tech companies. The suburban landscape remains dominated by overgrown and abandoned industrial parks.

In summary, here are the city's **issues**:

- ▶ Shortage of high-skilled laborers for tech and service sector jobs
- ▶ Not enough low-skilled jobs for less educated locals
- ▶ Lack of education and work opportunities for local youth
- ▶ Brain drain and a constrictive population pyramid

On the other hand, these are the city's **assets**:

- ▶ A developed business community focused on technology and services
- ▶ High demand for urban spaces in the city center
- ▶ Located in an attractive natural environment (foothill of Seyndall mountains)
- ▶ An unique post-industrial urban landscape with many tourist attractions

The city has a number of advantages it can use to dig itself out of its difficult situation. The essay will now describe how Pijova-Rocla can overcome these challenges and become a thriving city once more. Key to all solutions is the leveraging of the world wide web, internet-enabled devices (smartphones, PCs) and their capabilities (websites, applications, augmented reality) by the city's residents, as it provides a number of options for overcoming current issues..

The most pressing issue is the immediate future of the city's young residents. Many tech and service positions are up for grabs, there is a lack of skilled candidates that could fill them. Although there is a large pool of potentially useful young people, the present industries lack ways of educating and training them. Creating a new university would be impractical: institutions of higher education are notoriously hard to build from scratch, not to mention financially expensive and take years before they deliver tangible results. However, a much more realistic solution could come in the form of massive open online courses(MOOCs)<sup>1</sup>, developed and financed by local tech and service companies.<sup>2</sup>

By helping design the curriculum of these MOOCs, local companies could actively participate in training the next generation of employees. As these MOOCs would be free for anyone to use, requiring only an internet-connected device, they would offer an inclusive stepping stone to education and work opportunities for most of Pijova-Rocla's residents.<sup>3</sup> These MOOCs would be competitive in nature, not only teaching through uploaded material, but also regularly awarding grades to participants that hand in assignments. In exchange for funding these MOOCs, local tech and service companies would be given access to the best performing students and their contact details, providing them with a useful tool through which they can easily scout promising new workers.

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1. Internet-based courses, real life examples include Coursera and FutureLearn.

2. Alternatively, local companies could buy licenses for the thousands of existing MOOCs and offer them to interested locals.

3. If Pijova-Rocla is in Europe, which has a 85% internet penetration rate, we can assume most of its population can access the internet. IWS, *Internet Usage in the European Union, Internet User Statistics, Facebook & 2017 Population for the 28 European Union member states* <<https://www.internetworldstats.com/stats9.htm>>

With most of Pijova-Rocla's economic output being in industries such as manufacturing (57%) or mining and steel (6%), it is necessary to finance relevant apprenticeships in these fields. These apprenticeships must reflect the changing demands in these industries, especially with regards to automation. Manufacturing will need to adapt to the growing need for mental labor, urging apprentices to take up machine learning and provide creative new solutions for the industry, rather than committing to work that can be done by a robot.

New apprentices could be chosen through an online leaderboard of a business simulation game. Business simulation games<sup>4</sup> are often used in employment training in industries ranging from hospitality to finance.<sup>5</sup> Modifying an existing business simulator for the local manufacturing industry<sup>6</sup> would create a fun and interactive method for choosing new apprentices. Selecting apprentices for more advanced robotics jobs in the manufacturing industry could be based on machine learning competitions for student-submitted AIs.<sup>7</sup>

Apprentices from these industries should be urged to embrace new technologies, but also to shield Pijova-Rocla's natural environment from the polluting effects of their industries. Not long ago, this was a "highly polluted" city, but it has partially recovered and become once again attractive for tourists. High quality natural environments attract more tourists, and thus bring in more revenue via tourism.<sup>8</sup>

Tourism needs to be exploited whenever possible due to its significant economic benefits. With its landscape of "architectural gems" and "refurbished industrial halls" backdropped by the Seyndall Mountains, Pijova-Rocla has serious potential for tourism, especially as similar alternative tourist destinations are on the rise. Outside of the obvious tourist attractions, Pijova-Rocla should recognise the value of its industrial past and use it to promote itself as the next must-see destination.

Exploring the "overgrown manufacturing plants" can be a huge draw for visiting tourists. Popularly known as 'urban exploration', it is a popular activity that is entering the mainstream.<sup>9</sup> While cities all across the world ignore or reject urban explorers, Pijova-Rocla would do the opposite in recognising their value as tourists and giving them an opportunity to safely explore its industrial history. The experience could be enhanced through the development of augmented reality (AR) applications that visitors could download into their smartphones and tablets, using them to view the industrial landscape and examine what purpose it served or how it once looked.<sup>10</sup> This would also create low-skilled guide jobs for

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4. Also known as 'tycoon games' (examples include the popular series Railroad Tycoon), they simulate the management of a business and enhances it through gamification elements.

5. See this real life example: "IBM has managed to bridge the world of gaming and the smart factory via an interactive simulation game. It is designed to show how Watson, its artificial intelligence (AI) platform running on a supercomputer, can dramatically increase productivity. In the two-minute long "model factory" simulation, you take on the role of a shoe manufacturer and explore how production lines can use the Internet of things (IoT), analytics, machine learning and AI to double output, without doubling equipment and asset expenses." [https://www.ibm.com/industries/manufacturing/industry-4.0-modelfactory/?cm\\_mmc=OSocial\\_Blog-\\_-Industrial\\_Industrial+-+Discrete+Manufacturing-\\_-WW\\_NA-Industrial+Week+Editorial+Blog+Post&cm\\_mmca1=000019XS&cm\\_mmca2=10005255&](https://www.ibm.com/industries/manufacturing/industry-4.0-modelfactory/?cm_mmc=OSocial_Blog-_-Industrial_Industrial+-+Discrete+Manufacturing-_-WW_NA-Industrial+Week+Editorial+Blog+Post&cm_mmca1=000019XS&cm_mmca2=10005255&)

6. Modifying an existing game instead of creating a new one, as it is a much quicker and cheaper process, not to mention there is a wealth of business simulator games that can be easily modified.

7. Such challenges test user-submitted AI through a variety of tasks, including recognition, classification and localization. They require a high degree of machine learning and programming experience. For a real life example, see <https://www.kaggle.com/competitions>.

8. "The natural attributes of destinations provide the resources for wealth creation, by attracting tourists to them. Tourists desire to experience a 'good-quality' environment (...) thus endowing them with a sense of well-being." Andrew Holden, *Environment and tourism*. Routledge, 2016, p. 104.

9. André Jansson. "'This Is not Ruin Tourism': Exploring the Spreadable City." In *Locating Imagination: Popular Culture, Tourism and Belonging* (Rotterdam. 2017)

10. Current AR tech is already being used for tourism, with many cities funding the creation of AR applications that allow users to interactively view the history of urban spaces through their own devices. You can see an example of this here: <https://www.youtube.com/watch?v=5ZLNjnnXinA> and also here <https://youtu.be/ai416fGUJQg?t=41>.

Pijova-Rocla's long-term residents, who are familiar with these locations. They could earn money as salaried guides for visiting tourists, taking them on safe tours through the industrial landscapes. A portion of the revenue generated by this activity would be diverted into a fund aimed at conserving Pijova-Rocla's abandoned industrial sites, in addition to paying AR developers for maintaining and expanding the application.

Boasting a large number of "highly-skilled migrants", the presence of a "small-scale startup community" and being an interesting city located close to natural attractions, Pijova-Rocla has the prerequisites to attract so-called digital nomads<sup>11</sup> (DNs), ), adventurous young people who are often employed in the service and tech industries<sup>12</sup>. These people work remotely but spend locally, which is a net plus for the city in economic terms. Since DN's work remotely, they do not need to live close to centrally-located offices and often choose to rent apartments and houses outside of city center's due to their lower prices, especially if they are close to natural attractions. This would decrease pressure on urban living in the city center while bringing new customers and expanding the market for locally-owned businesses in Pijova-Rocla's suburbs. Furthermore, since most of these people are aged between 26 and 45,<sup>13</sup> they would also help balance out the city's aging population pyramid.

This could serve as an inspiration for the already-present tech and service companies to allow a greater share of remote working for their employees. Nowadays, advancements in communication technology and the proliferation of the internet have made remote working more accessible than ever. We are in an age when Skype calls are replacing in-person interviews and programs like Slack allow project leaders to effectively manage their employees without having to ever meet them. Remote working is on the rise world-wide<sup>14,15</sup>, and Pijova-Rocla could distinguish itself as a city that embraces this global trend.

We know that "significant number of (digital industry) jobs" are vacant. The affected companies could candidates from other cities by advertising the benefit of working remotely.<sup>15</sup> The condition would be a weekly visit to the centrally-located office, which would tie employees into living in the city, but at the same time give them enough freedom to make the job more desirable. This would increase demand for suburban living and other less developed parts of the city. There is no reason to not embrace the trend. Remote workers are proven to be as effective, if not more so, than their on-premise peers.<sup>16</sup> Employees working remotely claim to be able to focus better and engage well with their work.<sup>17</sup> Pijova-Rocla could use it to create a distinct vibe of being a high-end tech and service hotspot with uniquely mellow nature.

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11. Also known as location-independent entrepreneurs, they are individuals who work remotely by using their notebook or some other internet-accessible device.

12. Creating a [marketing campaign](#) for such new arrivals would be ideally centered around these three key items: Pijova-Rocla's natural and architectural beauty, the presence of a developed business community and the cheap price of suburban living. This solves the three core demands of digital nomads; travelworthy attractions, business opportunities and low-cost living.

13. Specifically, the ages were 26-30 (29%), 31-36 (33%) and 37-45 years old (18%) Emily Elwes. 'Our Trend Prediction: What The Digital Nomad Survey Told Us' *Welance*, (2016).

<<https://welance.de/journal/digital-nomad-survey-results-infographic/>>

14. In a survey of more than 15,000 US-based respondents, 47% responded that they work remotely at least partially, a number that has constantly increased each year in the last decade Noraj Chokshi. 'Out of the Office: More People are Working Remotely, Survey Finds', New York Times, February 15 2017 <<https://www.nytimes.com/2017/02/15/us/remoteworkers-work-from-home.html>>

15. 79 percent of knowledge workers in a global survey by PGI said they work from home, and 60 percent of remote workers in the survey said that if they could, they would leave their current job for a full-time remote position at the same pay rate. *2015 PGI Global Telework Survey* <<http://go.pgi.com/gen-genspec15telesur-SC1129>>

16. Condeco Whitepaper (2017) <<http://www.worktechacademy.com/content/uploads/2017/10/CondecoWhite-Paper-Remote-Working.pdf>>

17. Adrienne Bibby and Anne Rozier, *10 Stats About Remote Work* (2015) <<https://remote.co/10-statsabout-remote-work/>>

The solutions listed above are not modular answers to single challenges. Rather, they are, like cogs in a machine, all part of a broad and overarching strategy. In order to maximise their effectiveness, all should be deployed simultaneously as they are designed to work in sync. All of listed solutions take into account the need to generate revenue, keep Pijova-Rocla interesting for businesses and train the next generation of the city's industries. The collective aim is to rebrand Pijova-Rocla as hub of technology and services, transforming it from being an industrial ghost town into a city that embraces new technologies and takes advantage of the possibilities they bring.

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### **Videos and other internet resources**

<https://www.youtube.com/watch?v=ai416fGUJOg>

<https://www.youtube.com/watch?v=5ZLNjnnXinA>

<https://www.kaggle.com/competitions>