

ELEONAS ATHENS - INDUSTRY 4.0 CONCEPT

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INTRODUCTION

Within the context of an urban planning project, the focus refers to figure out if high-tech industrial revolution can take place in backwarded areas as well. Therefore, we developed a scenario in order to boost industrial activity and to get a forerunner in modern industries. To be more precise, the project is addressed to the district of Eleonas located next to the city centre of Athens which reflects to such an undeveloped area. Not even general tasks of urban planning have to be considered, as well five different political municipalities do have their sphere of influence in Eleonas which made it more complex.

EXPERIMENTS / FUNDAMENTAL OF THE PROBLEM / EXAMINATIONS

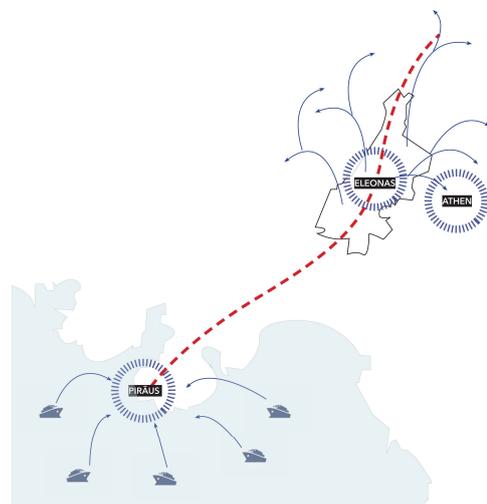
Giving an overview about the area/situation: A

kind of industrial activity has always been taken place in Eleonas. Starting with agriculture in producing olive oil at the beginning of the 20th century, industrial productivity continued in small scaled businesses and turned into big scaled factories and logistic facilities. Due to major migration streams and political disagreements during the last decades, industrial development was always been left by itself. That's why there is uncontrolled growth in Eleonas nowadays.



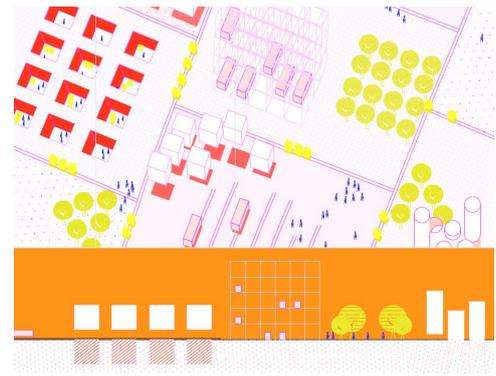
© Veličović: Eleonas - poor developed area

Why rethinking Eleonas would be a good choice for initiating industrial revolution is simply explained in three points: First, as mentioned above, the district is located close to the city centre which means there are a lot of advantages urban cities do have these days, including suburban mobility, infrastructure, education and healthcare system. Second, economic situation still suffers from the crisis of 2008. Situation cannot get worse! Being aware that might be a provocative approach, we believe a restart could recover the chance of high end industrialization. Third, the harbour of Piraeus is part of the so called *silkroad* which is a major infrastructure project initiated by the Chinese government. Piraeus should work as a bridgehead of this road. Therefore, the container terminal has been leased by COSOC, a major Chinese shipping company. Since 2009 they have already started to enlarge the terminal. The proposal is to reactivate and to improve industrial productivity in order to get a forerunner in modern high tech industries. Enable to set in motion the next generation of industry and to create a logistic and industry hub, two aspects seem worth to be discussed: First, the connection to the container



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terminal of Piraeus has to be extended in order to transport goods quickly and non-stop to the city centre. Implementing fast trains, magnetic railways or a hyperloop system may be suitable considerations. Eleonas should work as an integrate in a chain of distribution. From there, goods which are mainly coming from Asia, should be spread to Europe and finally to the consumers. This measure corresponds to the so called *silkroad* which is mentioned above. Second, we have to rearrange ownership and to reorganize the present building structure



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in order to assemble different skills/qualities of the existing industry and to gain public space. The latter allows to realize necessary infrastructure projects as well, e.g. streets and mobility concepts, electricity, extension of fibre cable for going global. Creative diversity and industrial productivity should be visible to the public in so called store and smart factories while production on demand is aimed to be state of the art. We intend to create an area where different players of different fields do have the opportunity to combine their skills. Permanent building structure will be removed by or changed into flexible/temporary units according to requirements of the producers/participants. Co-working spaces and creative labs enable interactive networking processes and stimulate productivity. Those flexible working units should provide all necessary infrastructure and attract skilled people from outside to settle their businesses in Eleonas.

Finally, all these measures should lead into a highly modern framework of an digitalized and autonomous working industry. Supported by good educational facilities like universities and research centres, Eleonas could become an attractive place to work amid of good infrastructure and open spaces. Well educated students and qualified employees may achieve pioneering work in high tech industry, mobility or sustainable energy supply. Once, industrial revolution has started, it should end up in a completely autonomous working industrial zone which is pioneering in many disciplines. Giving a prospect to the future, it might be not excluded industrial revolution will arise to the next generation 'Industry 5.0'!

RESULTS

Finally, it is necessary to mention that the project has not come to an end yet. It should be clear as well that it is a kind of prototyping which means that some visions of the output may be followed by a more speculative approach than scientific proof. That's why it might be hard to say anything about the results and in which way they could be transformed into reality. But, according to our current steps of working, two statements can be made for sure; the complexity is caused by many different parties which are involved, and 'Industry 4.0' is not the end of industrial revolution.

CONCLUSION

Initiating industrial revolution based in underdeveloped areas (like Eleonas) is not a question of single players, it is based on skills, qualities and responsibility and how they can be bundled in order to realize sustainable industrial development. Urban planning, law, politics and technical improvement enclose the frame of realization. It is needed to think in big scales when intending to change existing systems and habits of society. And that's what our topic is about. This can only be converted into reality by disregarding individual intentions and to concentrate on higher goals. Our next steps will be to find out in which way participating parties are influencing such a big scaled process of development and how to be involved in order to achieve their own goals.