CARGONATION

models of forms and urbanizations within the Belt and Road Initiative

“ I believe the essential quality for architects is not the intelligence but their strenght of spirit and perseverance to sustain a vision. The landscape of the unbuilt is a symbol of the presence.”

Tadao Ando, 2021 in Domus 1062

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Cargo nation: ***models of forms and urbanizations within the Belt and Road Initiative***

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BACK-GROUND/ INTRO-DUCTION

In 2013, Chinese President Xi Jinping announced the creation of a new "economic belt along the Silk Road"to link China, the Middle East, and Europe by cultural and economic corridors. The BRI is an audacious project of large infrastructure investments and trade deals designed to improve interconnection along the Silk Road Economic Belt and the 21st Century Maritime Silk Road. It is framed primarily as a policy to encourage friendly relationship and people-to-people exchanges and build a promising future by strengthening transnational cooperation and cultural relationships in the region. (Xi, 2013)

According to Di Donato (2020) The BRI has been designed by China to accomplish significant national economic and geopolitical goals like sustaining sustainable growth, continuing to expand international markets for hi-tech industries developed under "Made in China 2025," trying to escape the middle-income trap, and bolstering investment in rural and inner areas.

However, characterizing the BRI as only a plan for building infrastructure and improving economic connections would be grossly inadequate.
Despite the large and growing number of studies on the topic, mostly addressing the economic-geopolitical nature of the Belt and road initiative, the urban and territorial dimension remains partially unexplored.

In the Domus 1033 issue called 'the infrastructure of power', Hilgerfort (2019) highlights the centrality of infrastructure in the new silk road and highlights its spatial

relationships. In the BRI, the importance is such that a real culture of infrastructure can be defined within the programme. A culture which does not see infrastructure merely as a passive hardware of a universal language, but as a stratification of economic, political, social and even historical values. The historical element in the BRI narrative is pervasive; throughout history, China has had continuous periods of isolation and openness to external nations, but despite this, " for centuiries China has been developing a cocktail of infrastructure, border thickening and urban development as a way to build urban economic ties" (Ibid. 2019, 251)

Thus, new urbanities are emerging from the infrastructure that impose a reflection on the architecture and spatial form of these places. The model of urban development around infrastructure seems to be repetitive and indebted to the concept of port-park-city. Models that are already widely used to build new economic frontiers, but which isolate and tend to be exclusive. (Easterling, 2014) In this sense, one can speak of BRI as a constellation of point and diffuse investments rather than individual infrastructure lines.

In this thesis I will approach the urban issue of BRI precisely from a point of view. The hyper-entanglement of public and private, transnational, commercial and social relations offers the possibility to look at the New Silk Road from a planetary point of view. By changing the point of view from an infrastructure investment programme to a planetary 'hyper-project' (Morton, 2013), infrastructure

gains a whole new meaning. The spatial dimension of the BRI, embedded in the world's logistic-capitalist logics, assumes blurred boundaries that allow its theoretical framing in planetary urbanisation. (Brenner & Schmid, 2011)

The planetary experience of the BRI offers an opportunity to investigate the relationships and criticalities of its spaces with a comparative approach. Starting from the places and therefore from the final effects, in this case, seems to be the only way to understand the causes. The BRI multilateral rules and investment framework physically impacts the place. The infrastructure thus takes on an urban sense, which is however relatable to other urban projects under the same framework. This sharing of rules also leads to a standardisation of new urban plans. In some contexts, local contaminations are present, but the type of architecture and urban planning opens a reflection on the formal and non-formal identity of these places. Today, does the architectural identity of the BRI as an agglomeration of new urbanities offer an identity to the project in its global extension? To this and other questions I will not try to give answers, but to open a space for discussion, also through the proposal of new urban scenarios.

REFERENCE

Brenner, N., & Schmid, C. (2011). Planetary Urbanization. In M. Gandy, *Urban Constellation* (p. 10-13). Berlino: Jovis.

Di Donato, G. (2020, 05 08). *China's Approach to the Belt and*

Road Initiative and Europe's Response. Tratto da ipsionline: https://www.ispionline.it/it/pubblicazione/chinas-approach-belt-and-road-initiative-and-europes-response-25980

Easterling, K. (2014). *Extrastatecraft: The Power of Infrastructure Space*. New York: Verso.

Hilgerfort, J. (2019, March 1). *Infrastructure as foreign policy*. Domus, p. 248-257.

Morton, T. (2013). *Hyperobjects, Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press.

Xi, J. (2013, 09 08). *Promote Friendship Between Our People and Work Together to Build a Bright Future* . Tratto da Ministry of Foreign Affairs of the People's Republic of China: https://www.fmprc.gov.cn/ce/cebel/eng/zxxx/t1078088.htm

1

THE-CARGO NATION

Human beings have always felt the need to move. From the first nomadic peoples to the viae of the Roman Empire. From the merchant ships of the colonial empires to the first railway network. From the earth to the sky, from the sea to the mountains, mankind has always tried to create roads, routes, and paths that would make the movement of people and goods more efficient. All to be one minute faster than yesterday and one minute slower than yesterday. We are so tied to the infrastructure that we can no longer identify when we are in it or when we are out of it.

In this chapter, I try to explain mine original concept of Cargonation following discourse between urban theory and philosophy to give a new vision of the Belt and Road Initiative (BRI). Usually, talking about the BRI means talking about investments and infrastructure, but the "new silk and road" is something more than simple logistical investments in a globalized world. Following the official discourse by the government, BRI aims to build a community of common destiny, with infrastructure and logistics as the main exchange goods. (Wang Linggui, 2019) But which is the meaning of infrastructure in the BRI framework? And the community aforementioned, on which values relies?

According to Collins Dictionary, the word infrastructure is defined as the basic facilities such as transport, communications, power supplies, and buildings, which enable it to function. So, infrastructure is something physical and therefore tangible but also something intangible, like communications for example. But if the infrastructure is part of our habitual way of experiencing the world, it is also part of continuous urban development. In this sense,

Brenner and Schmid[1] (2011) amplify Collins' definition and look at infrastructure as a complex system of relationships that spreads global urban development. Planetary urbanization, as a theory, refers to the disintegration of the urban-rural or urban-anti-urban dichotomy, stating that now the urban paradigm, at different scales, represents contemporary economic and social values. Infrastructures are a fundamental part of this process of urbanization and act not only as a medium between places but as a place in itself. The infrastructure understood as a device of urban development leads therefore to reconsider the boundaries of the city and city life, contributing to the disintegration of the hinterland and leading to a diffusion of the urban outside its established limits.

The hinterland in this sense becomes a functional part of the city itself and contributes to its development through the placement of industrial, logistic, waste management facilities or mobility corridors associated with urban networks at a planetary scale [Fig.1]. Thus, the infrastructure extends the city with its flows, its metabolism in a multi-scalar perspective, producing operational spaces within a logistic system and exploitation of human and non-human capital. According to Brenner & Katsikis (2020), this spatial infrastructure contributes to generating a new operational landscape as part of the new urban scenario of the Capitalocene. The vulnerability of these territories coincides with the instability of Capitalism.

1 Neil Brenner and Christian Schmid are geographer, sociologist and urban researcher respectively chair at Harvard university GSD and ETHZ

Since centuries, infrastructure, whether understood as a single element or as a network, has always been at the service of something else. That something else has always been seen as the accumulation of capital and thus the city as a condenser of different activities. However, if the infrastructure has always been at the service of urban life, or facilitating trade and movement between two urban cores, how can it be distinguished from the city itself? Brenner (2017) introduces the concept of non-city, i.e. a space outside the city in its built form but not in its functions. Usually, the non-city is associated with the countryside, the hinterland, or the rural which, however, cannot be seen only as "backstage that supports the front stage operations of large population centers" (Neil Brenner 2017, 219). These are the spaces in which the city happens in secret. Spaces that are continuously operationalized to foster the development of the city. Therefore, it is possible to say that these spaces are strategically important for the process that is called 'urbanization of capital'. (Harvey, 1985) Operational landscapes are therefore instruments of capital accumulation or infrastructure-intensive areas that find their space in the non-city. The non-city, which should not be confused with the anti-city, (Cavin, 2005) is, therefore, the hidden scene of the city, which produces and transforms itself continuously through different extra-city activities (agriculture, extraction, forestry, tourism, and logistics) that today are confined and confused in a more general hinterland or countryside.

My initial assertion of no longer being able to recognize the inside and outside of the conceptual infrastructure is central to understanding operational landscapes as appen-

Fig.1: PLANETARY URBANIZATION: Global connectivity and accessibility, in Is the World Urban? Towards a Critique of Geospatial Ideology, Neil Brenner and Nikos Katsikis Authors Actar Publishers, 2019

dages of existing urban centers and motions of the development of new urban realities.
In my opinion, to better clarify the sense of planetary urbanization, referring to the infrastructure, its operations, and its flows, it is possible to associate with it the concept of hyperobject proposed by Timothy Morton[2].

The theory of hyperobjects refers to a broader content of philosophical disciplines such as Oriented Object Ontology (OOO) which intends to describe phenomena of global scope characterised by a high degree of complexity that it is impossible to distinguish their phenomenality from the relations that exist within them. Hyperobjects as narrated by Morton (2013) have much to do with Brenner and Schmid's planetary urbanization and the concept of infrastructure that I am trying to pursue.

I would like to reflect for a moment about the transportation system. Try to think about moving around in a city and having to use a bus, a metro, or a train. It might be easy to distinguish between being on the bus and off the bus. But is it equally easy to distinguish between being inside the transport network of the whole city and being outside it? For example, the moment I decide to take a bus, I am already inside the transport network because I will have to adjust my activities according to the bus schedule. In that sense, we are never outside the infrastructure. Of course, you might say, if you leave the city, you are no longer part of that network, but to leave it I would have

2 Timothy Morton is a philospher, member of object-oriented philosophy movement. He is professor at Rice University.

to be in another network, perhaps one that contains the previous one, such as a motorway, an airport, a national railway. An hyperobject for Morton is something like this: a sometimes-recognisable entity in which we are always embedded. According to Morton (2013), the example par excellence is global warming. We know that we are in it, that it causes climate change as a recognisable effect, but climate change gives us only part of the global warming hyper-object.

The interconnections are so vast in space-time that they cannot all be considered at the same time. The hyper-object is thus an object that is expressed in many objects or events that are interconnected in the temporal dimension, which in turn contains a spatial dimension. Is not global trade something of a hyperobject? A product consumed in Europe could just as easily have been produced in Asia 20 days earlier or 30 days or more, perhaps already knowing its destination. But in this case, there are rules of production, who manufactures it, the raw materials needed, the time of delivery, the customs rules, the energy needed to produce it and move it, and, last but not least, the necessary pre-existence of someone willing to consume that specific product. The hyperobject is thus explicable, but not describable through its interobjectivity and phasing.

However, while global trade and logistics seem to represent well the idea of hyperobject complexity, Morton (2013) explains how a hyperobject is characterized by five interconnected qualities: viscosity, temporal ondulation, phasing, interobjectivity, and non-locality.

Viscosity concerns the specific characteristic of hyperobjects to always be among us, we cannot leave a hyperobject, just like the example above. In this sense, considering the coexistence of cities and non-cities and the destruction of the hinterland, contemporary urbanity is continuous. We could say we are in two cities of different states, but could we ever say we are in two different systems? The exceptions are few.

Temporal ondulation, on the other hand, concerns the impossibility of measuring or determining the presence of the hyperobject in a given time. What we can observe are only the infinitesimal parts of the hyperobject itself, which have temporal connections with other parts prior, contemporaneous or posterior to the moment in which they are observed. In other words, the hyperobject has its own duration in time, but the extent of this duration is such as to prevent recognition of the hyperobject in its total definition. The concept of phasing is closely related to this.

Phasing is the characteristic of showing itself in phases. The hyperobject "shows itself to human perception as a section of an architectural project" (Morton, 2013, 101), so that we can only experience the hyperobject in a certain space at a certain time. The space of the non-city that we now look at is an appendage of other consequential spaces and other phenomena of value extraction that occurred before or simultaneously with the moment in which that space is observed.

So, the relation of a hyperobject to other objects describes

the characteristic of interobjectivity, i.e. the inclusion of indeterminate relations between objects that the hyperobject includes. And these connections concern everyone, not only the human point of view, which would be intersubjective, but also other entities, or other hyperobjects. Global trade or the operational landscape of the city are very inter-objective in this sense, precisely because although they are human phenomena, they affect the whole planet ecologically.
The last feature, non-locality, is closely related to the concept of the absence of an 'Elsewhere' as in planetary urbanization, and to a close extent it is traceable to the non-locality of the effects of BRI. In fact, if in planetary urbanization cities constitute a global vibrancy elsewhere beyond its administrative boundaries, in BRI this sense of absence of elsewhere is implicit in its official statement and in its non-locality of effects.

To offer a better idea of non-locality I would take as analogy the Jackson Pollock painting [fig.2]. By analogy, Jackson Pollock, one of the greatest representatives of abstract expressionism, offers a possible representation of what can be understood as a hyperobject outside of a spatial-temporal location. By means of a painting technique known as dripping, Pollock manages to imprint several layers of paint on the canvas through a fluid movement. In the repetition of this movement, it is possible to detect the presence of different moments and elements, but it is not possible to establish what happened before and after.

In this sense, the viscosity of the elements brings us back to one of the characteristics of hyperobjects. Moreover,

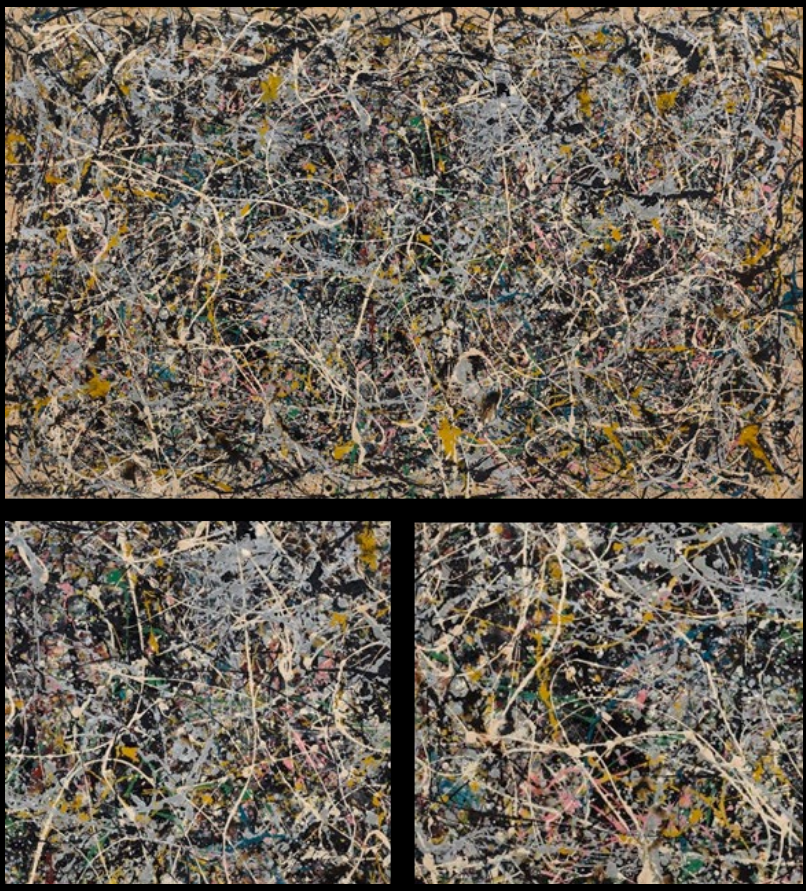


Fig.2: The number 1, 1949. The nonlocality of the Hyperobjects is the impossibility to localize the hyperobject through its effects. Similar in a Pollock's drawing we cannot understand the location of these two zooms even though they are part of the same painting. Of course in the case of the hyperobject the 'complete form' is not given as the painting

zooming in on the picture, it is not possible to trace a particular element back to the general one, because each zoom always offers the same perception of the picture. So how can one determine where one is, without being able to distinguish one area from another. This is the non-locality of hyperobjects. Elements that are never localized but always have interobjective connections with all other elements, just like pollock's fluid canvas, where everything seems apparently in disorder but in order with the other things around it.

To sum, although the theory of hyperobjects still has much to prove, it has some elements in common with planetary urbanization, in particular the absence of an 'Elsewhere'. In fact, a hyperobject has no elsewhere by definition, it exists at all times and therefore in space. Planetary urbanisation in this sense has no elsewhere because it extends the concept of the city to a global scale, made up of influences, networks, infrastructures, and distinguishes only the city from the non-city, but not as a dichotomy but as a same identity. As explained, also the BRI as no elsewhere. Indeed, the "space" of the BRI extends all over the world, including political relations, economic investments, trade routes and local and global strategic assessments. Its infrastructure exists spatially but has no spatial boundaries. The BRI is difficulty locatable, just like a hyper-object. But its nonlocality is derived by specific instruments, which are intrinsically linked to the concept of infrastructure.

Huang[3] (2016) pointed out how the central role of infrastructure in international cooperation and development is an important function that distinguishes the Belt and

Road Initiative from many other international cooperation mechanisms. This is important because large-scale investments in infrastructure during China's reforms enable rapid economic growth and is one of the most important factors in China's miracle. This is also important, as most Belt and Road countries invest very little in infrastructure. The reasons for underdeveloped infrastructure vary from country to country. Some are constrained by financial support, while others cannot be planned, built, or coordinated. The infrastructure is therefore the hardware of the BRI, the main spatialization of a complex and sophisticated set of rules. According to Easterling[4] (2014), infrastructure is a hidden sub-layer that acts as a medium between forms and rules. Although the space of infrastructure is physically recognisable, its ontology resides in the invisible relationships between objects. A building can have a form just as a line of code can have an active form in the infrastructure space.

The BRI system relies on the constitution or expansion of new urban realities, mostly characterised by special rules regimes, where domestic and international jurisdictions overlap and identities fade into the horizon of an ocean of stateless products. The culture of 'made in' no longer takes place in these spaces. Special Economic Zones, Free Trade Zones or Economic and Technological Development Zones are just some of the names by which extrastatecraft can be described. Extrastatecraft is thus an in-between of two nations or between two different systems of rules; an

3 Huang Yiping is a professor of economics at Peking University. He is a highly recognized expert of financial services in China
4 Keller Easterling is an architect, writer and professor at Yale University.

credit: AsianBriefing Ltd

Fig.3: The map shows the China's overseas special economic zones and industrial parks. Most of them are located in Africa and south east Asia: all zones that suffer by underdevelopment infrastructures. The Special zones are managed by a State-Owned Enterprise with private partners and local government, to boost the business of the companies outside of China with a favorable tax and diplomatic environment. (Devonshire-Ellis, 2019)

autonomous spatial fragment with its own precise legal identity. In this term it is possible to associate the tools of the BRI to the extrastatecraft and its special zone. [Fig.3] However, the concept of Special Zones comes from the free ports that have been at the centre of world trade for decades. In the second half of the 20th century, Special Economic Zones began to become increasingly formalised at the economic and administrative level, and over time they evolved from simple urban additions to real cities, with their own fiscal and legal rules (Easterling, 2014).

Thus, the SEZ, incorporating the whole sense of economic liberalism, began to incorporate residential, commercial, tourist, and educational offerings and became a spatial product that could be replicated worldwide.

The zone is replicated all over the world with a few adjustments becoming a place that has no national identity but is a hybrid between the host nation and the nations participating in the zone. These zones, by offering quasi-diplomatic immunities; financial services for global corporations; highly specialised construction companies; advanced infrastructure systems; just-in-time management techniques; (Easterling, 2014) are to all intents and purposes a global logistics centre where goods and financial capital are at the heart of the project (Mezzadra & Neilson, 2015). It is in this framework that Brett Nielson[5] and Sandro Mezzadra[6] clarify the relationship between financial capital and logistics as an operational power.

5 Brett Nielson is professor at Institute for culture and society of Western Sidney University
6 Sandro Mezzadra is a Philosopher, chair of Political Philosophy at Bologna Univerisy.

“Financialization has produced, but also faces, a new landscape, making it necessary to rethink arguments about globalization, the relevance of territory and space, the role of the state, structures of governance and legal orders, and the relation of capital to labour and social cooperation”(ibid. 2015, 2).

Financial capital and its continuous movement have, therefore, a material consistency that produces relations with territories, spaces, and their rules. According to Nielson and Mezzadra (2015), forces of capital extension, referring to the extraction processes of raw materials as well as to the gentrification processes of urban space, together with logistics, are crucial in the contemporary global economic scenario. If the extraction of value is at the basis of the productive and generative processes of the “new landscape”, logistics is the operational power that expands the spatial boundaries of these processes of extraction and accumulation. In this sense, logistics has produced a global communications network that finds its form in “industrial locations, zones, and hubs through calculations that balance the cost of labour against the cost of transport... enabling of such logistical processes through infrastructural installations and interventions, both in the realms of hardware and software.” (Ibid. 2015, 3)

Thus, is possible to say that Special Zones, create a localization of the global logistic system to facilitate the movement of goods and capital, without a local identity. The physical tools, operating as hardware, together with the rules through which they are implemented, like software,

are elements of a global process that tends to favour and maximise the turnover and production of a capital that does not have its own locality. In this sense forces of production and movement of people and goods (cargo) are in continuous tension between each other.

In the BRI this is central. New urban scenarios are produced as a result of, or simultaneously with, the creation of logistics hubs, industrial parks, etc. It would be interesting to see what comes first in the BRI's intentions, goods, or people, but from the considerations so far it is possible to see that logistics, by contrast to production, is nothing more than a force for the production itself. Much of the narrative associated with the BRI considers it as a new form of colonialism, an economic operation to build and improve infrastructure in other states in order to gain politically dominant positions over these states. In the words of Kleven (2019)," a colonialism with Chinese characteristics". Although the official Chinese response is always clear in downplaying any geo-political presumption of the BRI (Cheong, 2019) Western scholars are firm on the point.

However, it is curious to note that the term cargo and colonialist action are not associated for the first time. In fact, already at the beginning of the 20th century, the presence of the cargo-cult was found in peoples of Papua New Guinea. The cargo cult is a thousand-year-old cult of the indigenous peoples of the area. The cargo cult has its basis in the myth that a divine entity will spread goods in abundance for all. According to Buck[7] (1988) the presence of this belief among the indigenous peoples facilitated colonisation first by Europeans and later by Australians. In fact, the

Europeans, through missionary actions, transformed the meaning of the cult of the cargo ship in order to propose a new Christian evangelisation, exploiting the goods and merchandise of the cargo ships in order to obtain land and cheap labour. In fact, the cult of cargo soon became a justification for exploiting the island's resources and introducing capitalism. The cult of the cargo ship has almost completely disappeared today, but the power of the cargo as an element of new urbanisation has remained.

With the spatialization of the Special Zones and their rules; with a logistical strategy as the main driver of this special urbanization, the BRI become more a nation, a Cargo Nation Even though the term Nation is traditionally associated to sharing a common history and cultural tradition, from what I argued so far, I would point out the BRI as a Nation itself, made up of many extra-states with their own laws. Something similar to a federalism between special zones where the central government is associated with the main investors and private stakeholders of the initiative, such as private logistic companies, Governments, nongovernmental actors, and financial stakeholders.

A nation in which one of the most recognizable unifying elements is cargo, freight transport, logistics, production, and the extraction of new capital. The cult of cargo has been associated with colonialism and the enrichment of Europeans over local populations. Thus, the Belt and Road with its complex software will tend to enhance its exclaves

7 Pem Davidson Buck is an anthropologist, Professor Emerita of Anthropology at Elizabethtown Community and Technical College in Kentucky.

in the states, the SEZ, but as has been amply demonstrated, the benefits of the SEZ tend to stay within the zone itself, also creating an economic disadvantage for the local areas outside (Engmani, Onoderai, & Pinali, 2007). If the relations with the cargo and logistics as identity values are clear, there is a problem to set which is the physical identity of these spaces that have no identity for the people but for the goods.

Furthermore, a Nation without a clear identity what kind of architecture generates within its border? What kind of urbanization generate and through with logic? Is there a space for discussion for new architectural experiments? Is there contamination with local influences or we are looking to a new international "style"?
However, nowadays the Cargo Nation is continuing to expand, replicating its software all over the world, infrastructure new spaces in a way that I would call Cargonization. Thus, as a new urbanization process, identities, tension, flows, values, and social questions assume the spotlight of the scene that require further investigations, however, planetary citizenship is perhaps not so far off.

REFERENCES

Brenner, N. (2017). *Critique of Urbanization: Selected Essays.* Basel: Walter de Gruyter GmbH.

Brenner, N., & Katsikis , N. (2020, January 1). Operational Landscape. *The Landscapists*, p. 22-31.

Brenner, N., & Schmid, C. (2011). Planetary Urbanization. In M. Gandy, *Urban Constellation* (p. 10-13). Berlino: Jovis.

Buck, P. D. (1988). Cargo-Cult discourse: myth and the razionalization of labor relations in Papa New Guinea. *Dialectical Anthropology*, 157-151.

Cavin, S. (2005). *La ville, mal-aimée : représentations anti-urbaines et aménagement du territoire en Suisse : analyse, comparaisons, évolution.* Lausanne: Presses polytechniques et universitaires romandes.

Cheong, D. (2019, March 9). *Belt and Road Initiative not debt-trap diplomacy, says China*. Tratto da The Straits Times: https://www.straitstimes.com/asia/east-asia/belt-and-road-initiative-not-debt-trap-diplomacy-says-china

Devonshire-Ellis, C. (2019, October 31). *China's Overseas Free Trade Zones & Industrial Parks*. Tratto da silkroadbriefing.com: https://www.silkroadbriefing.com/news/2019/10/30/chinas-overseas-free-trade-zones-industrial-parks/

Easterling, K. (2014). *Extrastatecraft: The Power of Infrastructure Space*. New York: Verso.

Engmani, M., Onoderai, O., & Pinali, E. (2007). *Export Processing Zones: Past and Future Role in Trade and Development.* OECD Trade Policy Papers, 70.

Harvey, D. (1985). *The Urbanization of Capital*. Baltimore: Johns Hopkins University Press.

Huang, Y. (2016, July 30). *Understanding China's Belt & Road Initiative: Motivation, framework and assessment.* China Economic Review, p. 314-321.

Kleven, A. (2019, May 6). *Belt and Road: colonialism with Chinese characteristics.* Tratto da The Interpreter: https://www.lowyinstitute.org/the-interpreter/belt-and-road-colonialism-chinese-characteristics

Manuel, R. (2019, September 1). *Twist in the Belt and Road.* Tratto da China Leadership Monitor: https://www.prcleader.org/manuel-belt-road

Mezzadra, S., & Neilson, B. (2015, January 1). Operations of Capital. *South Atlantic Quarterly*, p. 1-9.

Morton, T. (2013). *Hyperobjects, Philosophy and Ecology after the End of the World.* Minneapolis: University of Minnesota Press.

Wang Linggui, Z. J. (2019). The Community of Common Destiny between China and its Neighbors: A New Paradigm for Promoting World Socio-Economic Development. In Z. J. Wang Linggui, *China's Belt and Road Initiative and Building the Community of Common Destiny* (p. 3-22). Singapore: World Scientific.

2

THE-SPATIAL FORM OF THE BRI

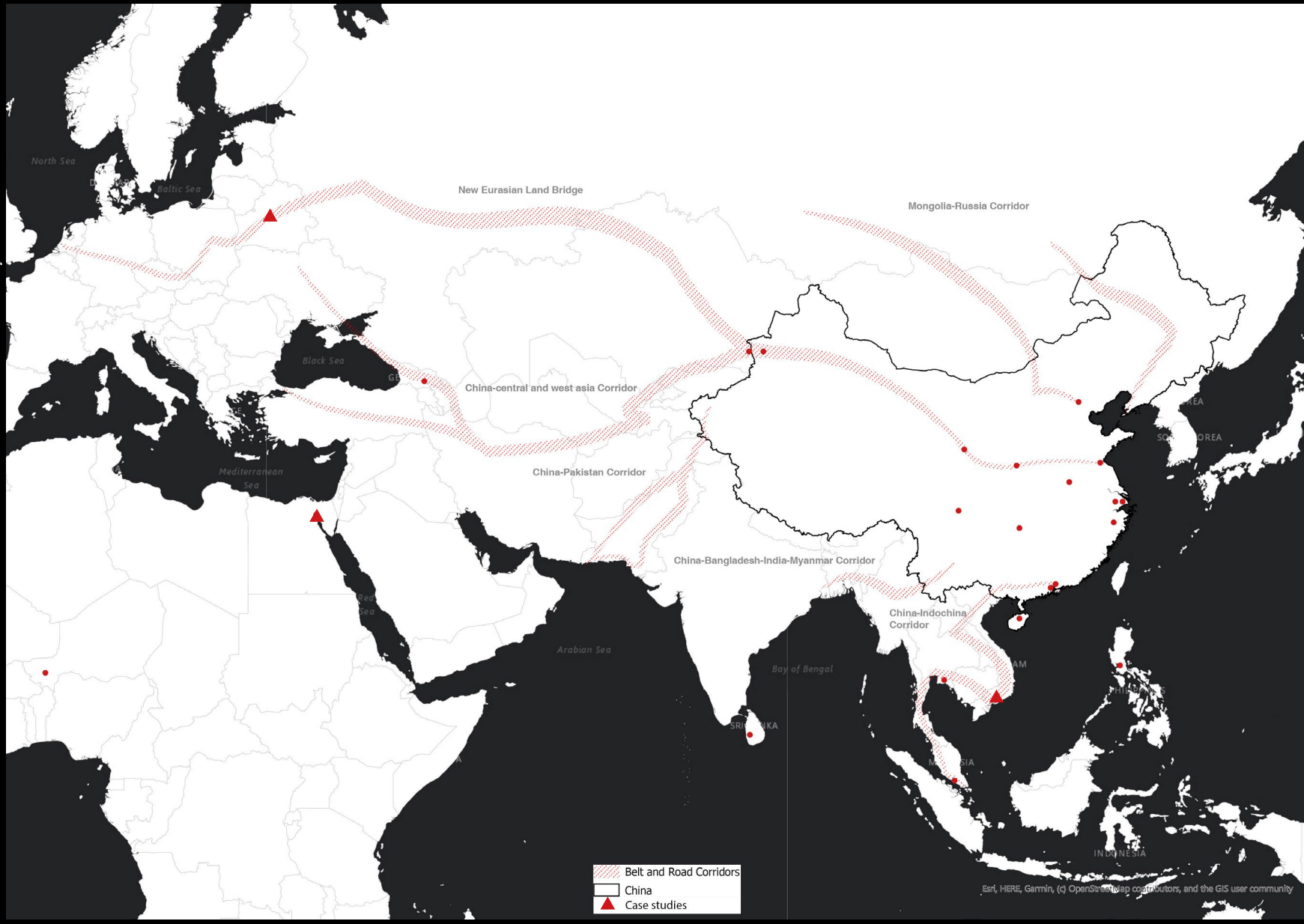
In the previous chapter, I reasoned about a theoretical framework in which look at the BRI not only in terms of geo-political discourse. Even though the BRI is, to all intents and purposes, a programme of a political initiative by the Chinese government, it is also true that it generates spatial effects, because the space is the primary asset of that programme. But what are these spatial effects and their forms?

BRI as a spatial programme

According to Teo, et al. (2019) BRI is largely driven by infrastructure projects along geographical corridors connecting China to various parts of Eurasia, which is encouraged by geostrategic and macroeconomic development priorities. Geopolitics frequently defines and constrains infrastructure. Infrastructure may support geopolitical goals such as conquest, competition, or collaboration by connecting people, products, energy, and information spatially. Other forms of cooperation, including policy coordination, commercial, financial, and socio-cultural ties, are supported and facilitated by this infrastructure. Since from the first official statements the spatial dimension of the BRI was clear. According to official documents and Huang (2016), the operative space of the BRI is not randomly placed. Indeed, its development goes along six different geographical corridors [Fig.1]:

- **China-Mongolia-Russia Economic Corridor**
- **New Eurasian Land Bridge**
- **China-Central Asia-West Asia Economic Corridor**
- **China-Indochina Peninsula Economic Corridor**
- **China-Pakistan Economic Corridor**
- **Bangladesh-China-India-Myanmar Economic Corridor**

The map shows the geographical corridors of the Belt and Road initiative. The map explain the chinese-centrality of the project. All the corridors are going out from China reaching the Europe passing through Africa and Central Asia. Three cases are highlighted among a selection. All of these caseses are significant to understand the manifacturing space of BRI and its logic.



These corridors are the actual space of the BRI programme. All of them are directed toward Europe and creating a global network of nodes linked one each other, as a long string of pearls. It is possible to say that these routes are the parterre where the games happen, and the spatial effects are more significant. However, the term spatial effects are too general and can be explored in various directions.

Some scholars, as Lall & Lebrand (2020), tried to understand the spatial effects under a quantitative approach. Their research points out that the improvement of the infrastructure network, in China and central Asia regions generates inequalities. On one hand, direct investments in infrastructure improvements boost the economy of regions with cheaper access to a foreign market; this is particularly true for the urban centers in border or port regions.

On the other hand, the gains in terms of Gdp by the urban centers highlight the inequalities with the place close to them. Indeed, spatial concentration of economic activity can be accompanied by increased spatial inequality if workers are not free to move, or if they are slow to adapt to the opportunities available in and around the city center. This is especially true in countries where there are rules on controlled internal migration as Asia central states or China.
Thus, this approach, highlights how infrastructure spatialization becomes a social-spatial issue. In a certain mean, the infrastructure program with its logistical facilities creates at the same time both wealth and barriers. That point

is also supported by the actual form of the infrastructured space.

As highlighted in the previous chapter one of the most common types of BRI's spatialization programme is the promotion of Special Zones. (Devonshire-Ellis, 2019) The special zone is a way to improve the export of Chinese companies using tax advantages, and it is a legal system well known in economic discourses. However, the zone, according to Easterling (2014) is exclusive, both in the physical (with boundaries) and socio-economic sense (with inequalities). Indeed as a research by UNIDO (1982), the Special zones create an economic-legal enclave within a host country and while it is beneficial for the host economy at the beginning, it will turn its legal benefits into disadvantages for the rest of the host economy if will become a perpetual condition.

Special economic zones

As highlighted so far the main urban policy software of the BRI relies on the Special zones concept. This is the main actor (figurated) that generates the spatial effects. To be clear, Special Zones are not a new concept in the history of China.
A primordial idea of special zones can be found in the free-cities of the Hanseatic League and then in the main "free-ports" of the seventeenth century. (Meng, 2005) During the eighteenth century, with the spread of colonies by Great Britain, Spain, Holland, and France the free ports zone in the world was tenfold. However, if the concept of a Special zone descends from the historic free port tradition,

it is only in the 1970s that the zone assumed a more abstract legal entity as we know it nowadays. In particular, in China, the creation of the first special zone is a recent fact.

According to Zeng (2012), after the decade-long failure of the Cultural Revolution, which left the economy inert and the people physically and emotionally depleted, China was in desperate need of structural transformation in the late 1970s. To respond to this emergency, Deng Xiaoping, the principal creator of China's Open Door policy, initiated economic reform in 1978, a radical step at the time. Shenzhen, Zhuhai, and Shantou in Guangdong Province had been declared as special economic zones by August 1980.

The four SEZs were all relatively similar in that they were huge territories with the goal of facilitating broad-based, comprehensive economic growth, and they all benefited from unique economic, investment, and trade rights. They were purposefully placed far from the capital city in order to limit both possible hazards and political meddling and near to Hong Kong and Macao to take advantage of their presence in terms of trading. The creation of the first four special zones was a pilot test to evaluate their effect on the GDP, and if they were positive, new areas would be evaluated. So, they were. In 1984, the zones realized 20% of the total foreign investments (ibid., 2012) then the Chinese government decided to approve new zones. They created new fourteen Special zones called ETDz, different from the first four only on the smaller territorial scale. And so on, until 2010 there were 70 Special zones including various types of zones such as high-tech industrial development zones (HIDZs), free trade zones (FTZs),

export-processing zones (EPZs), and others. All of them with a different focus. At this point, in 2013, The BRI came at the top of the "going out" policy, with the most commitment of China in the globalized world. As a result of that experience, China is actively marketing the concept abroad. With Chinese SOEs and private enterprises eager to grow markets outside of China, it makes sense for China to work with its foreign diplomatic missions to promote the benefits of creating Economic Zones or Industrial Parks outside. (Devonshire-Ellis, 2019)

Even though they have different names, with a different focus, all of them share a common meaning of urban development. In this sense, Easterling (2014) pointed out the fact all the Special zones aim to become a proper city. The most renowned example is in China. Shenzen, from a small city of some ten thousand inhabitants, turned into a megacity of 12 million people; the Pudong area in Shanghai was established in 1993, and nowadays it counts one-third of the entire population of Shanghai. Moreover, with its new skyline, it became the postcard of Shangai itself. But if the examples of Shenzen and Pudong are extreme, many other special economic zone districts (in and out of China) are trying to pursue ambitious urban plans. Most of them use the model port-park-city as a base.

Port-Park-City

The port park city model (PPC) is a specific urban action plan used to develop degraded districts or areas that are in a good position to access the infrastructure. The PPC model has a place in the special economic zone literature.

Indeed, one of the first attempts to build a PPC came from Shenzen and in particular from the development of Shekou Area by China Merchants Group. (Yeung et al., 2009)

According to *China Today* (2021) with the sponsorship of China Merchants Group, the Shekou area started from the eighties to develop the port infrastructure and then, from time to time, expand the manufacturing hub during it soon in an industrial park. A lot of international firms, attracted by the Legal benefits of the zone, installed their offices there e turned what was an ugly port zone into a safe a modern piece of the city. Many nations along the BRI route are in a similar scenario to Shekou's 40 years ago. Depending on Shekou's experience, China Merchants Group has advocated a similar growth strategy based on local characteristics in other countries. The PPC approach has been used in places such as Djibouti and Sri Lanka.

However, even if the PPC seems a winning urban model it leads to a standard recipe with no local identity. Indeed, the three elements of the PPC are simple:
- A port that serves as a logistic base; can be a seaport or a dry port, as in Khorghos for example.
- A park that serves a production of goods or services; can be an industrial park with a specific focus or with a mixture of various companies
- A city as a complement to attracting life from outside of the 'logistic zone', offers housing to workers and brings inside the area the urban life with leisure and commercial facilities attracted by the fiscal advantages.

Thus, along with the Belt and Road initiative, many places

have been urbanized through that simple formula. Even if BRI does not develop only urban plans, many of them put at the center the manufacturing hub as a way to improve and reduce the cost to access to the global logistic chain.

Tales from the ground

As highlighted so far, the BRI space is compressed among many fragmented projects each one with a special status. However, even though all the projects follow similar paths of urbanization, there are some specific domains in the architecture field that can be analyzed. One of the most evident effects of the BRI concern the spatialization of the manufacturers. In most of the projects, due to its logistic nature, the BRI implements manufacturing hubs connected in a multi-function dimension. Understanding the spatial effects of some of these projects means understanding the repetitive formula of the entire program. To do so, I selected three case studies that vary for some peculiarities of their specific development program.

- Great Stone Industrial Park in Belarus;

- Suez Economic and Trade Cooperation Zone in Egypt;

- Long Jiang Industrial Park in Vietnam.

Great stone Industrial Park

53°54′7.938″N
27°58′25.615″E

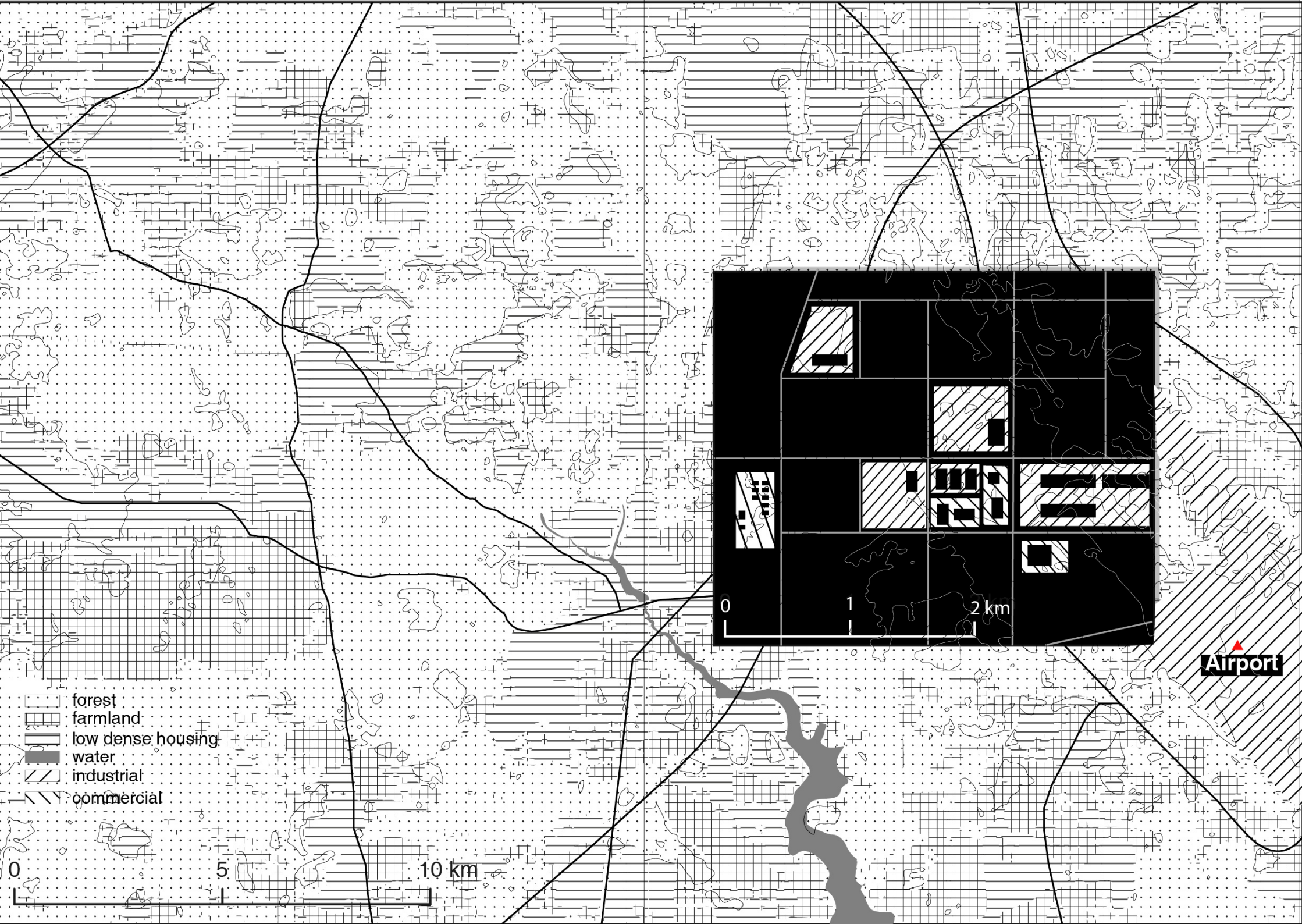
Great Stone Industrial Park is a manufacturing hub providing tariff-free entry to the Eurasian market within proximity of the European Union. The park is located close to Belarus'capital, Minsk, and directly on the Northern Corridor of the New Silk Road trade route, forming a key part of the "One Belt, One road" initiative. The Industrial park is managed as a SEZ and it is located 25 kilometers from Minsk.

That special administration attracts companies offering a special taxation regime. The park offers ready-to-use manufacturing facilities for rent or purchase allowing production to take place quickly, or the option to build your own production facility in the park. The general plan is designed around four main functional zones: residential buildings, public buildings, industrial buildings, landscaping, and recreational zone. Its construction is planned in five stages and by 2060, the project will complete the last stage of development.

In the end, more than 130 thousand people will live here in the future. The characters of the Great stone are typical

recurring in the SEZ typology. From a formal point of view, there are no highrise buildings or spectacular architecture: most of the buildings built are limited to 2-3 story height. The vision of the park is business-oriented so, no touristic attractions are planned. However, the multi-stage plan of the park looks like a city with a strong infrastructural connection. A business city with a free-trade zone and with special economic and immigration treatment.

One of the key points of the park is the three-tier management structure. The Intergovernmental Coordination Council is the main governing body of the park which is in charge to set the park's goal; The Industrial Park Administration is a state institution and it is in charge to attract new residents and manage visa procedures; The Industrial Park Development Company develops and maintains the park's infrastructure and utilities, buildings, and communal areas. It is also in charge to lease and buy a plot of land providing operational and consulting services to the residents.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water
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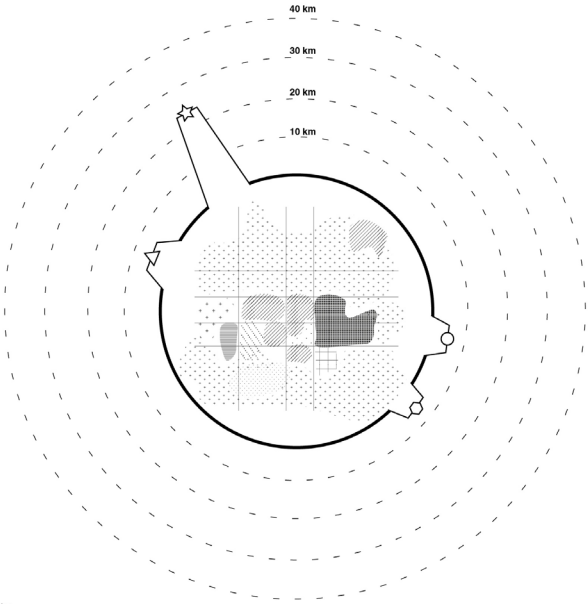
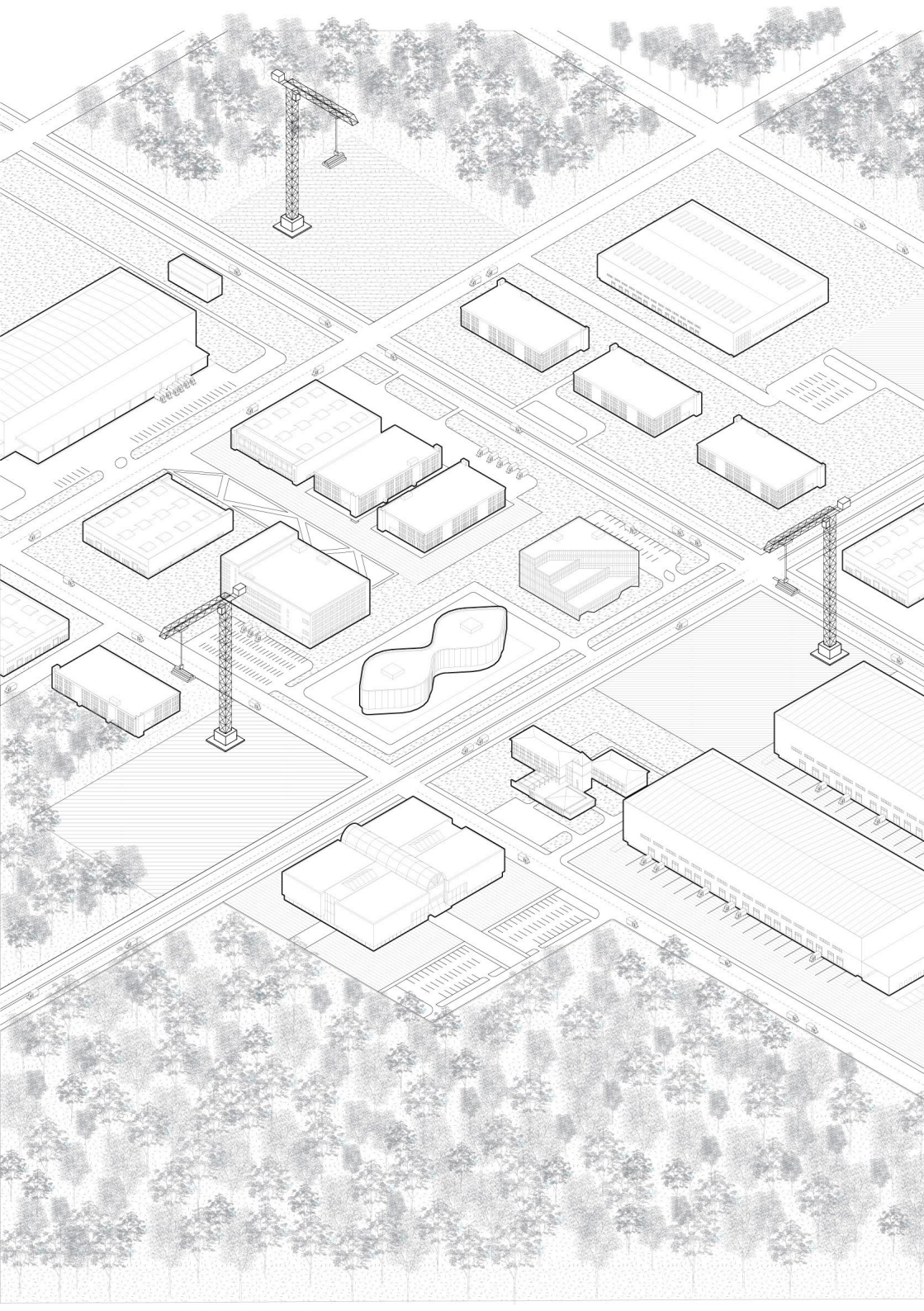
Airport



Main city
Railway
Airport
Highway
Logistic Hub
exhibition center
offices
housing
Industrial facilities
commercial facilities
Not developed field

The diagram shows the distribution and the prevalence of the different functions hosted inside the Zone. The zone is well connected with the logistical distribution network. In addition the short distance from Minsk, the capital, offers the opportunity to enhance the human capital.



Suez Trade Cooperation zone

29°40′15.838″N
32°18′47.232″E

Suez Economic and Trade Cooperation Zone (SETC) is an industrial estate in Egypt where hundreds of Chinese companies are setting up industries, as part of the Belt and Road project. It was built by the Tianjin Economic-Technological Development Area (Teda).

The zone was created in 2008 and extended in 2016 in a ceremony attended by Chinese President Xi Jinping on a state visit to Egypt. The zone hosts several enterprises and manufacturing companies, including Jushi, which produces fiberglass in Egypt primarily for export. The EU introduced significant tariffs on fiberglass imports from Egypt as a result, alleging they were dumping the fiberglass.

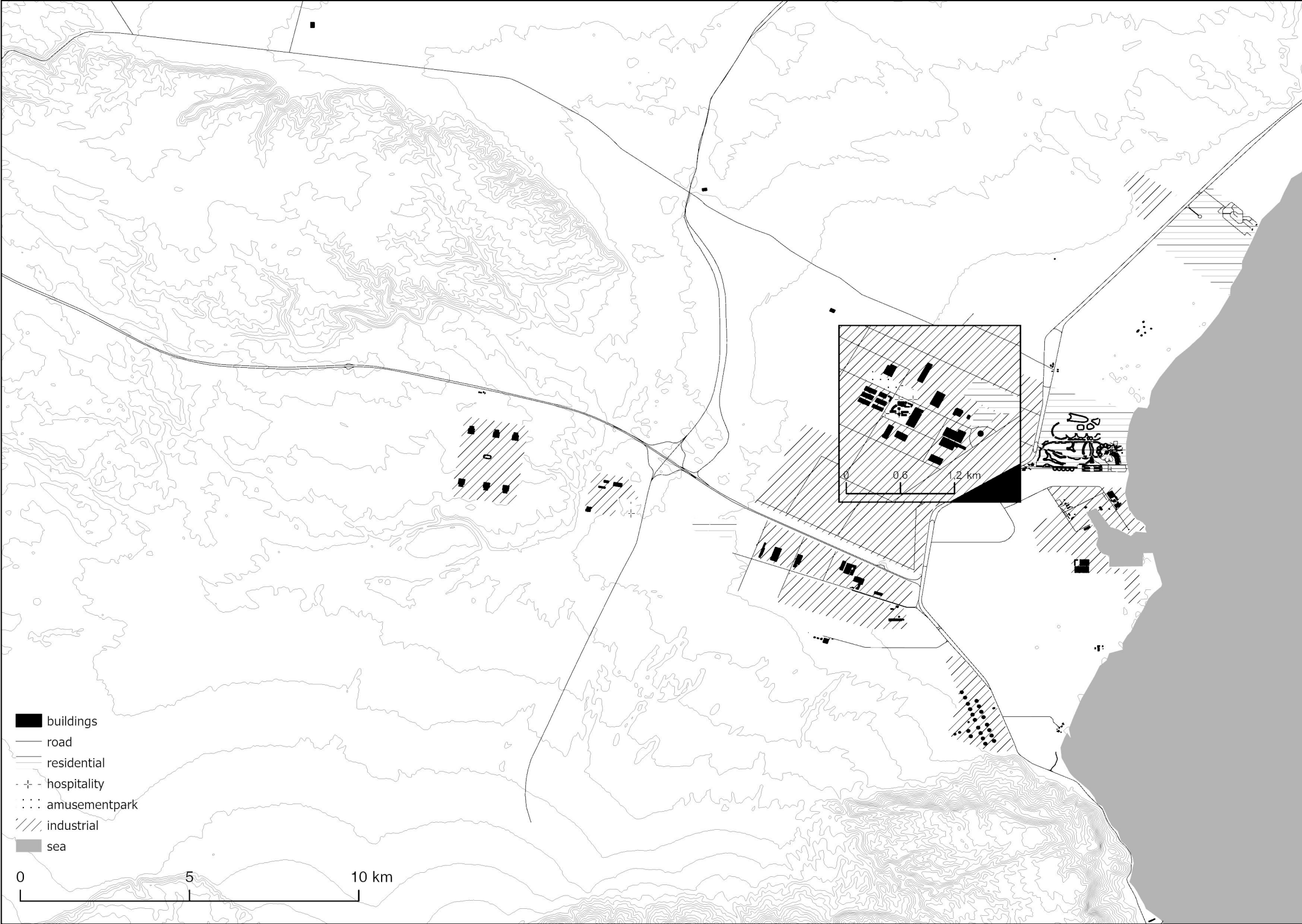
The Suez Economic and Trade Cooperation Zone is located in the Northwest Economic Zone of the Gulf of Suez in Egypt. It is 120 kilometers from Cairo and 40 kilometers from Suez City. The short-term planning area is 7 square kilometers and the long-term planning area is 20 square kilometers. It focuses on industrial projects, covering major

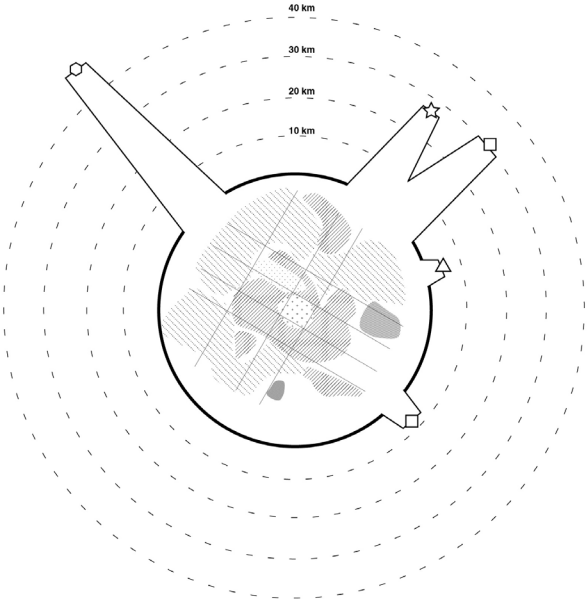
industries such as processing and manufacturing, logistics, bonded, technology development, commerce, and modern services.

The first phase of the Suez Economic and Trade Zone has been completed, covering 1.34 square kilometers.

It is close to the Suez Canal and Egypt's third-largest seaport-Insuhana Port. The cooperation zone not only fills up the deficiencies in Egypt's domestic market but also radiates the world market with the help of the free trade agreements signed between Egypt and the European Union, Africa, the Middle East, and other major economies in the world.

Five major industrial parks including petroleum equipment, high and low-voltage electrical appliances, textiles and garments, new building materials, and machinery manufacturing have been formed.


0
0.6
1.2 km
buildings
road
residential
hospitality
amusementpark
industrial
sea
0
5
10 km



Main city

Airport

Commercial port

Highway

Industrial facilities

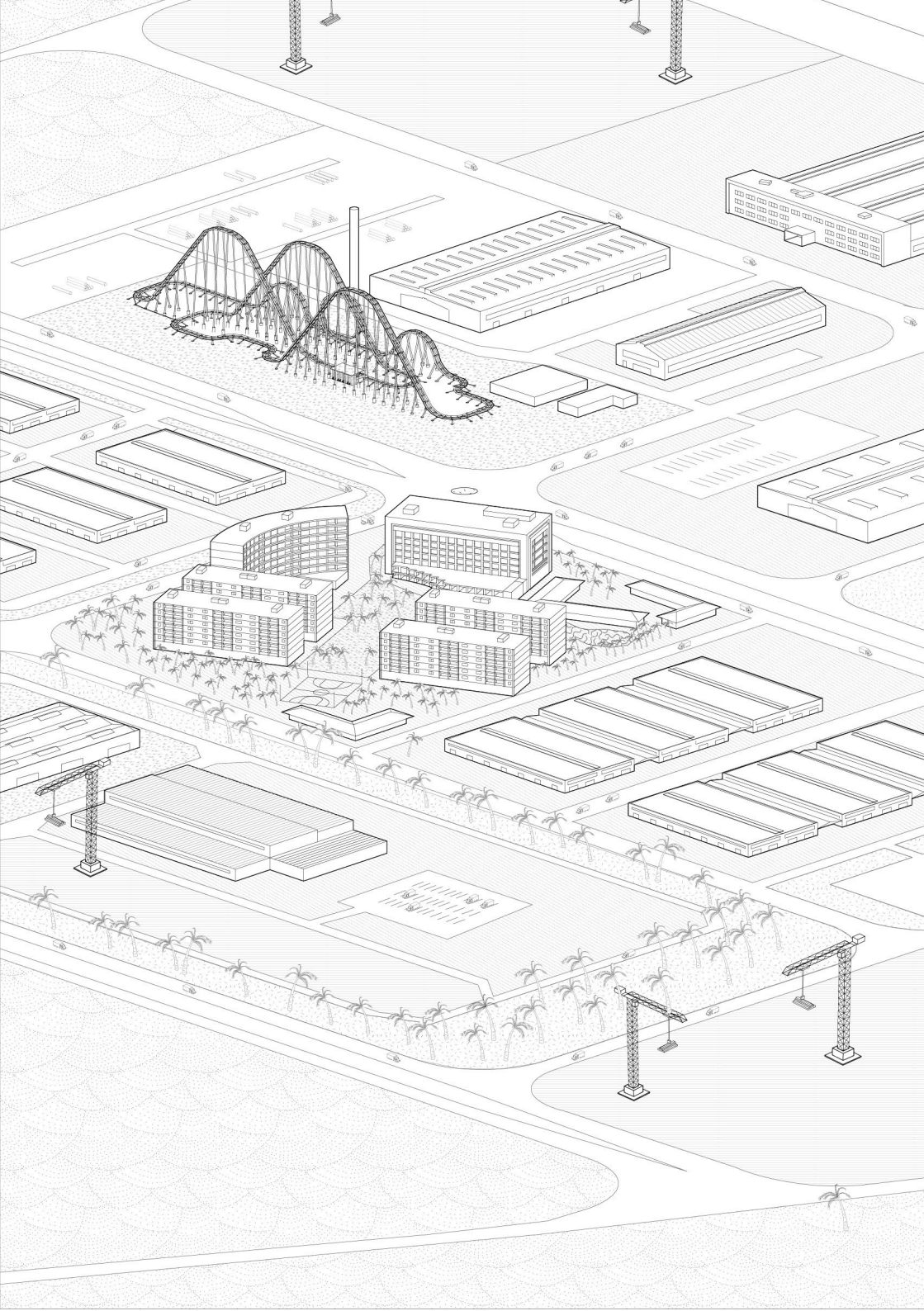
Amusement park

housing

Not developed field

Hospitality

As the previous case study, the SETC has a good access to the trade global network. Furthermore, the spatial distribution of the function highlight the key presence of hospitality and recreational facilities that may attract temporary people with business puropose.



Long Jiang Industrial Park

10°28'29.37"N
106°18'26.363"E

Long Jiang Industrial Park (LJIP) was established in November 2007, with a project term of 50 years. LJIP is located in Tan Lap 1 Commune, Tan Phuoc District, Tien Giang province, alongside the Ho Chi Minh city – Trung Luong Highway. It is the park with the highest growth potential along the Belt and Road, and its construction model has extremely high value for promotion and replication. LJIP has outstanding features for the success of manufacturing investors:

- **Convenient transportation. With a distance of about 50 km to HCM city center, Saigon seaport, Hiep Phuoc seaport, and about 35km to Bourbon port, transportation of goods to/from LJIP for import/export are so convenient without traffic congestion, thanks to the newly-built HCM city – Trung Luong Highway.**
- **Attractive tax policy. The policy includes the 15 years preferential period for corporate income tax with a tax rate of 10% since having revenue, which includes 4 years of tax exemption from the 1st profit-making year, and 9 subsequent years with a tax rate discount by 50%. Besides, investors shall enjoy tax**

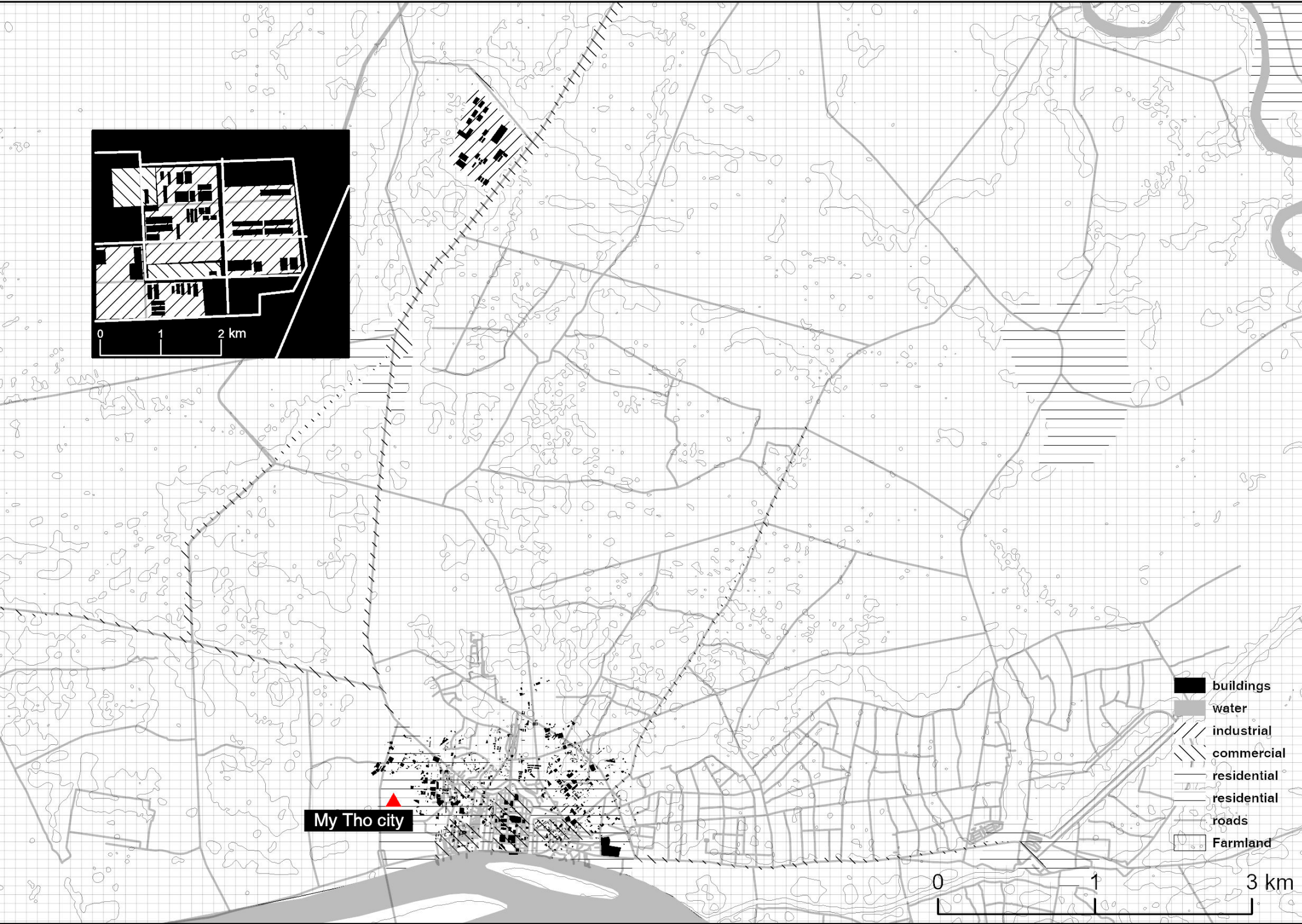
exemption when importing equipment and machinery to form fixed assets and 5-year tax exemption when importing raw materials, materials, and semi-finished products, which are not yet manufactured in Vietnam.

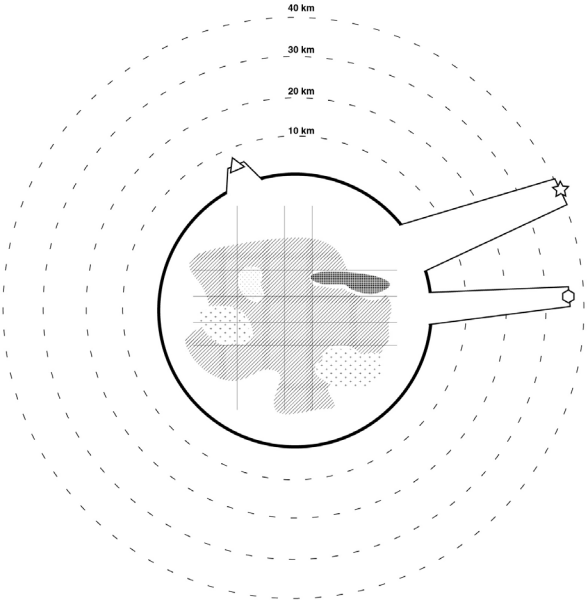
- **EPZ policy. Enterprises that export the majority of their products can register to operate under the EPZ policy in order to enjoy preferential tax policies (import tax & VAT) in accordance with the regulation of EPZ.**

- **Abundant local labor sources.**

Tien Giang province has a population of about 1.8 million people, mostly young, dynamic, and hard-working. Investors may easily recruit their workers from the local residents or other nearby Mekong delta provinces.

With internal roads, power & water supply systems, storm drainage, sewage treatment plant, telecommunications system, and supporting services, LJIP ensures stable development for the investors in the IP.


0
1
2 km
My Tho city
buildings
water
industrial
commercial
residential
residential
roads
Farmland
0
1
3 km



Main city

Airport

Highway

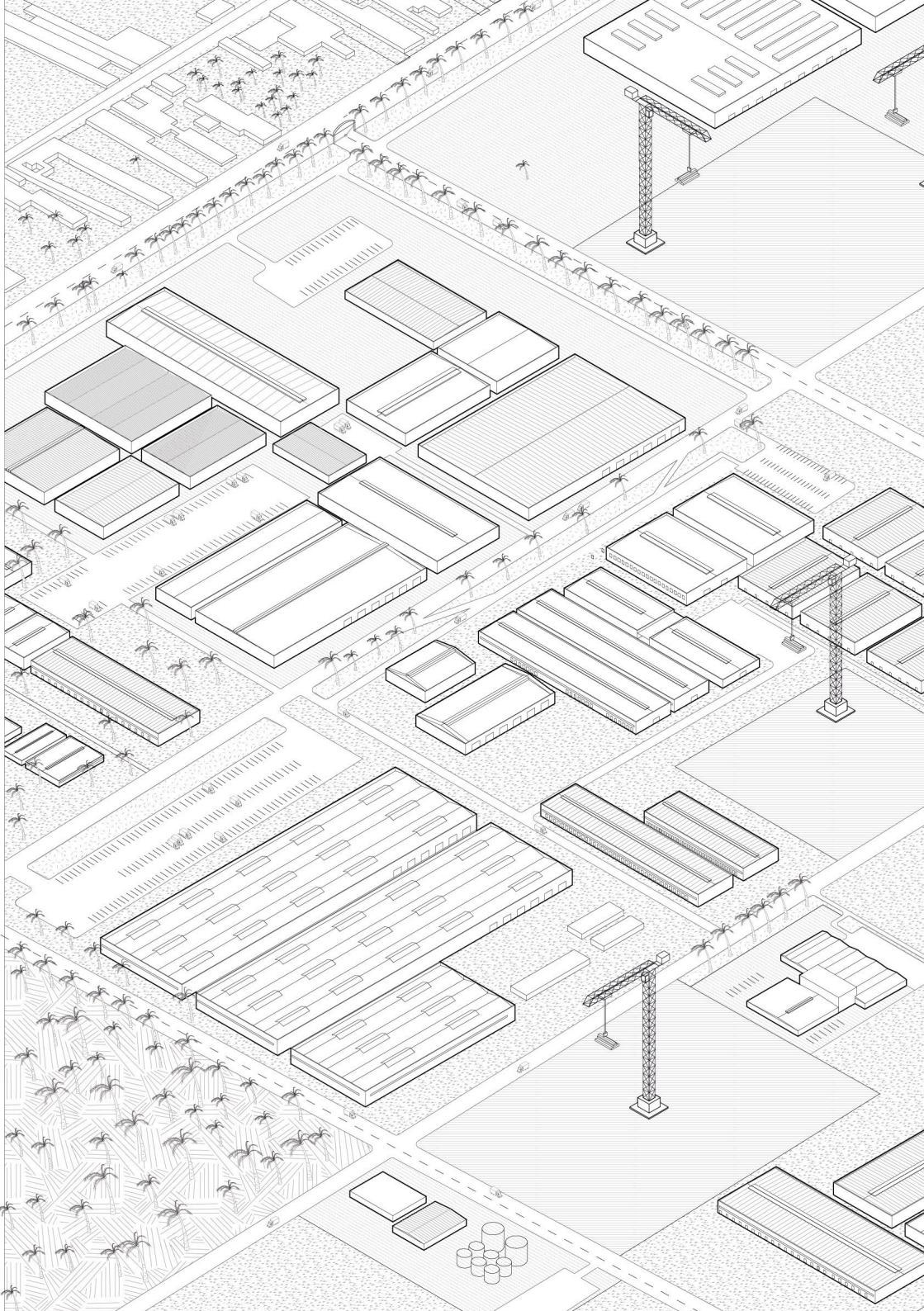
Logistic Hub

offices

Industrial facilities

Not developed field

Long Jinag has a great prevalence of manifacturing facilities, with wkal integration with other functions. Also, the main infrastructure of the regions are not close to it highlighting a strong dependence on the motorway.



Thus, looking at the case studies above it is evident that there is a constant repetition of functions and building types. The case studies have similarities that make them comparable. For example, they all show a considerable presence of industrial buildings typical of industrial parks.

However, the association between this function and the others varies. Another constant in all cases is the presence of a connecting infrastructure on a national or international scale. In Minsk, the airport; in Suez, the port and coastal highway; in Long Jiang, the presence of the Saigon port, one of the largest container hubs in South East Asia.

In Great Stone there is the presence of offices and exibithion centres, as well as commercial areas. Of all the areas, Great Stone is the one with the most marked urban character. The architectural variety of the buildings, as well as some stylistic contaminations, transform an isolated area into an urban texture. The presence of an exhibition centre facilitates the integration with the society outside, offering an integration between production, sale and exhibition. The presence of a housing attracts a population living within its boundaries.

In Suez, on the other hand, one can observe the prevalence of industrial areas complemented by tertiary services. The presence of the sea and of some villages on the coast has favoured the installation of some tourist areas within the industrial park. Like real oases in the desert, the Suez trade economic zone offers the possibility of hosting a temporary population also attracted by the installation of leisure and entertainment areas. Despite the fact that the urban

form is weaker than its predecessor, the presence of temporariness offers a particular element which relates it to the contemporary and urban value in the use of the city.

In Vietnam, the Long Jiang emerges by its traditional approach to industrial park. While in other cases the rigid urban grid leaves room for the insertion of alternative functions and architectures, here, industrial and logistics buildings are almost the only function present. Moreover, it is possible to highlight how the organised street grid corresponds to a disorderly spatialisation of the buildings, thus tending to make the urban function prevail over the urban scene. Housing in this case is not housed within the area but in its immediate context. The nearby location in My Tho city favours the integration of the industrial park with an already consolidated residential area, thus creating a dialogue between a traditional residential context and an industrial park that is clearly modern in its intentions.

Therefore, from the spatial analysis, the urban form of the BRI seems to possess both common and repetitive characteristics and programmatic peculiarities. In particular in both Suez and Minsk there is a search for a new urbanity of space by offering a programmatic functionality that also looks at the presence of an 'external other'.

However, the search for a new urbanity constitutes an attempt to cluster space, neither exclusive nor inclusive. In fact, all these urban plans, although they well include logistic-productive needs, seem, in the light of the facts, to exclude various environmental problems. Do we still need special quasi-new towns to satisfy logistic-productive

reasons? How do these new towns relate to today's environmental emergencies? Finally, who is 'the other', outside the area, by interest or right?

Reference

China Today . (2021, 07 12). *Shekou where dreams become reality.* Tratto da chinatoday: http://www.chinatoday.com.cn/ctenglish/2018/et/202112/t20211207_800269295.html

Devonshire-Ellis, C. (2019, October 31). C*hina's Overseas Free Trade Zones & Industrial Parks.* Tratto da silkroadbriefing.com: https://www.silkroadbriefing.com/news/2019/10/30/chinas-overseas-free-trade-zones-industrial-parks/

Easterling, K. (2014). *Extrastatecraft: The Power of Infrastructure Space*. New York: Verso.

Huang, Y. (2016, July 30). *Understanding China's Belt & Road Initiative: Motivation, framework and assessment.* China Economic Review, p. 314-321.

Lall, S. V., & Lebrand, M. (2020, September 15). Who wins, who loses? Understanding the spatially differentiated effects of the belt and road initiative. *Journal of Development Economics*, p. 1-18.

Meng, G.-W. (2005, June 1). Evolutionary model of free economic zones. *Chinese Geographical Science volume*, p. 103-112.

Teo, H. C., Lechner, A., Walton, G. W., Shun Chan, F., Cheshmehzangi, A., Tan-Mullins, M., . . . Campos-Arceiz, A. (2019, June 19). Environmental Impacts of Infrastructure Development under the Belt and Road Initiative. *Environments,* p. 20-42.

UNIDO. (1982). *export processing zones in the developed countries.* Vienna: United Nation Industrial Devolpement Organization.

Y. Yeung, J. Lee, G. Kee (2009) China's Special Economic Zones at 30, *Eurasian Geography and Economics*, 50:2, 222-240

Zeng, D. Z. (2012). *China's Special Economic Zones and Industrial Clusters: Success and Challenges* . Cambridge, MA: Lincoln Institute of Land Policy .

3

THE-OTHER SIDE OF THE MEDAL

In the previous chapter, I showed how the BRI replicates spaces and urban plans through a repetitive urban formula without any particular attention to the whole project, as unity, and the opportunities that it brings. However, Belt and Road Initiative is not a brand new program and it has roots in the past and the history of China. In the past, the silk and road represented a series of predominant trade routes with Europe, to facilitate exchanges of trade, commerce, and culture. The statement of the BRI is to reinvent the silk and road in an enhanced formula to promote "peace and cooperation, openness and inclusiveness, mutual learning and mutual benefit." (National Development and Reform Commission, 2015, 1)

Clearly, that program goes beyond the ancient routes but, the historical background is still playing its role not only in the vision but also in the development. Indeed, the Eurasian Land-Bridge, one of the BRI's corridors, follows mostly the ancient route of the silk and road, passing through important cities. In 2014 part of the ancient silk and road became UNESCO world heritage recognizing the importance of this route and its places. Thus, along this route is located Wuwei city, the case study which I am going through. Wuwei city is important to understand some of the contemporary challenges of the belt and road initiative for several reasons both on a local and global scale. These reasons are related to logistics, Gobi desertification, and identity.

So, in this section, I describe these issues both from a local and global scale and explain why they matter.

Logistics

According to L.Lee & Shen, (2020) the belt and road initiative is a huge program that has to deal with a complex logistic challenge. If we take into consideration the land route, nowadays, the only possible path is passing through the north of the Xinjian region and then through Kazhakistan, circumventing the Tibet plateau. This corridor is well-known since remote times as the Hexi Corridor, one of the main routes of the former silk road. In this route, Wuwei and other cities, such as Lanzhou or Urumqi, are key points. All these cities are connected by the G30 expressway that links the east coast of China with the faraway region of Xinjian. As stated by Wen & Mao (2021), the G30 is a primary road for the new Eurasian Land Bridge, the G30 Expressway plays an essential role in enhancing commercial cooperation and cultural exchanges under the Belt and Road Initiative. It is an essential piece of basic infrastructure that contributes to the region's transportation capabilities, economic growth, the tourism sector, and the building of China's ethnic unity.

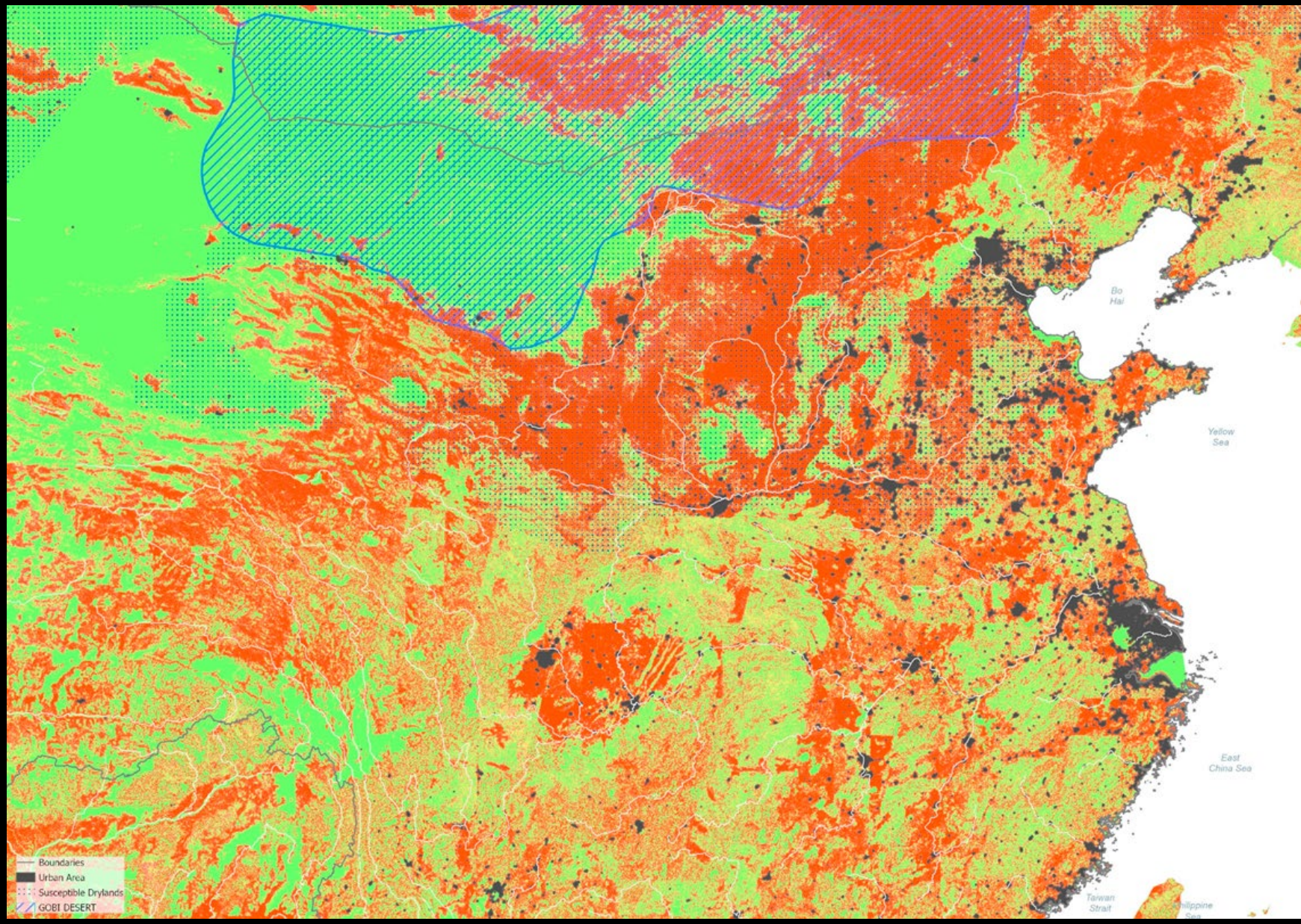
But Belt and Road logistics look beyond the local infrastructure. In the framework of the planetary urbanization theory, according to Fullbright's fellow research Andrew Stocklos (2016), the global logistic transport system is reshaping the western part of China. Indeed, in his speculative research, has been highlighted how the extraction exploitation of China's remote regions along the new Eurasian Land Bridge, is turning the landscape and the global logistics value chain. Apparently, the development of a new manufacturing district in these zones is shifting the

coastline of the production from the east coast to the inner west regions as Gansu and Xinjiang. The cost/time per goods travel comparing rail shipping and ocean shipping to Rotterdam is more convenient starting from Lanzhou or Urumqi than Shanghai or Lianyungang. Wuwei, located in the middle of Gansu province, not far from Lanzhou, may take advantage of this ongoing strategy.

As reported by Xu, Eiweida, Zheng, Xiao, & Zhao, (2018) the entire Gansu Province assumes a key position in the Belt and Road Initiative. According to the report, Gansu will construct more than 70,000 kilometers of roads and railroads over the next six years, as well as new passenger and freight lines to central and western Asian nations, to accelerate the creation of Gansu's important transport routes with Central Asia, West Asia, South Asia, and Europe. Moreover, the Gansu province's government is keeping a medium-high speed of economic growth and urbanization. According to that development strategy, in 2014 Wuwei city was designated one of the two tariff-free zones in Gansu together with Lanzhou, making the city desirable for new investments. However, the strategic position of Wuwei city in the Gansu Province and therefore inside the global logistics chain of the BRI is threatened by the ongoing desertification of the Gobi desert.

The map shows the area of Gobi desert and the effect of the desertification. As is possible to see the area of susceptible land is vast and threats many important cities (darker mass).

Also, the map illustrates the presence of Greenland (red) and and dry or consumed land in green.
This visualization allows to understand that a great part of greenflieds in northern China is at ecological risk.



Desertification

Every year, China's desertification consumes hundreds of square kilometers of agricultural land. It's a massive and unprecedented task. Specifically, every year, the Gobi desert consumes 3,600km2 of grassland. The State Forestry Administration of China has classified land desertification as the country's most serious ecological threat, and climate change would further exacerbate the situation. (Nieuwenhuis, 2016)

Desertification has a social effect too. According to Nieuwenhuis (2016), because one-third of the country's land area is eroding, 400 million people are struggling to cope with a lack of fertile soil, destabilized climatological circumstances, and acute water shortages. One of the direct consequences is the called 'ecological migration phenomenon. For example, as Wong (2016) pointed out, only in the Ningxia Hui autonomous region, next to Gansu Province, more than 300.000 people has been moved from their homes to new villages due to desertification issues and exploitation of their lands by new industrial activities. To these special migrants the government promised new lands as the originals, but the majority of them have not been satisfied due to the impossibility to offer back the same amount of land recovered.

Furthermore, China is trying to stop the desertification of the Gobi following a planting strategy. In 1978, China has launched a program called Three-North Shelter Forest Program better known as the Great green wall. The program aims to plant trees to hold back the expansion of the

Gobi desert. The ongoing strategy includes both the aerial seeding of trees and the presence of monetary incentives for local farmers to plant trees. However, according to many researchers, the reforestation program is not giving back the expected results. For example, Cao et al. (2010) revealed that the level of precipitation of the dryland is not sufficient to support trees on a large scale and afforestation stimulates land degradation due to exploitation of local limited water resources. Also, along with this position, a global survey of 26 arid regions has been conducted to show that tree planting reduces annual water runoff by 30-100%, which causes or increases water scarcity. (Farley, Jobbágy, & Jackson, 2005) Even though this problem are well known since the eighties, (Jiang, 2016) the government is still pushing forward the 'Great green wall'. That is because according to Jiang (2016) over the years the program has been inserted in the official political's rhetoric and attached to more meanings. Also, a sort of media glorification of some local positive attempts (mostly on the eastern part of the north of China) influenced the vision of the faraway people that do not live close to the Gobi, the majority actually.

Moreover, planting trees has perfect political timing. Planted trees can survive if investment and climatic conditions are good drylands for the first few years. But over time, some of these trees will shrink it will eventually die under harsh environmental conditions. (ibid., 2016) In spite of that, whether from a global or national point of view the Great Green Belt is the best solution to fight or at least slowdown desertification; from the local side of the program the opinions are different. Wuwei City is on this side.

Stanway (2021) highlighted how there is a huge effort from local farmers to help the reforestation program, but at the same time, the government is not putting the same effort to assure the arable and grazing land for the local farmers. Indeed the desertification, with climate change accelerating the issue, is impossible to stop just planting trees or bushes; (ibid. 2021) this situation leads to a change from productive, arable soil to a forest, however is not effective as should be. Wuwei like other cities close to the Gobi is losing its agricultural land in favor of forests, but there is no replacement for new cultivable soil. Thus, if the commitment of local communities seems effective for the forestation program implementation, will be possible to argue the same effectiveness for the local communities, in terms of economy?

Identity

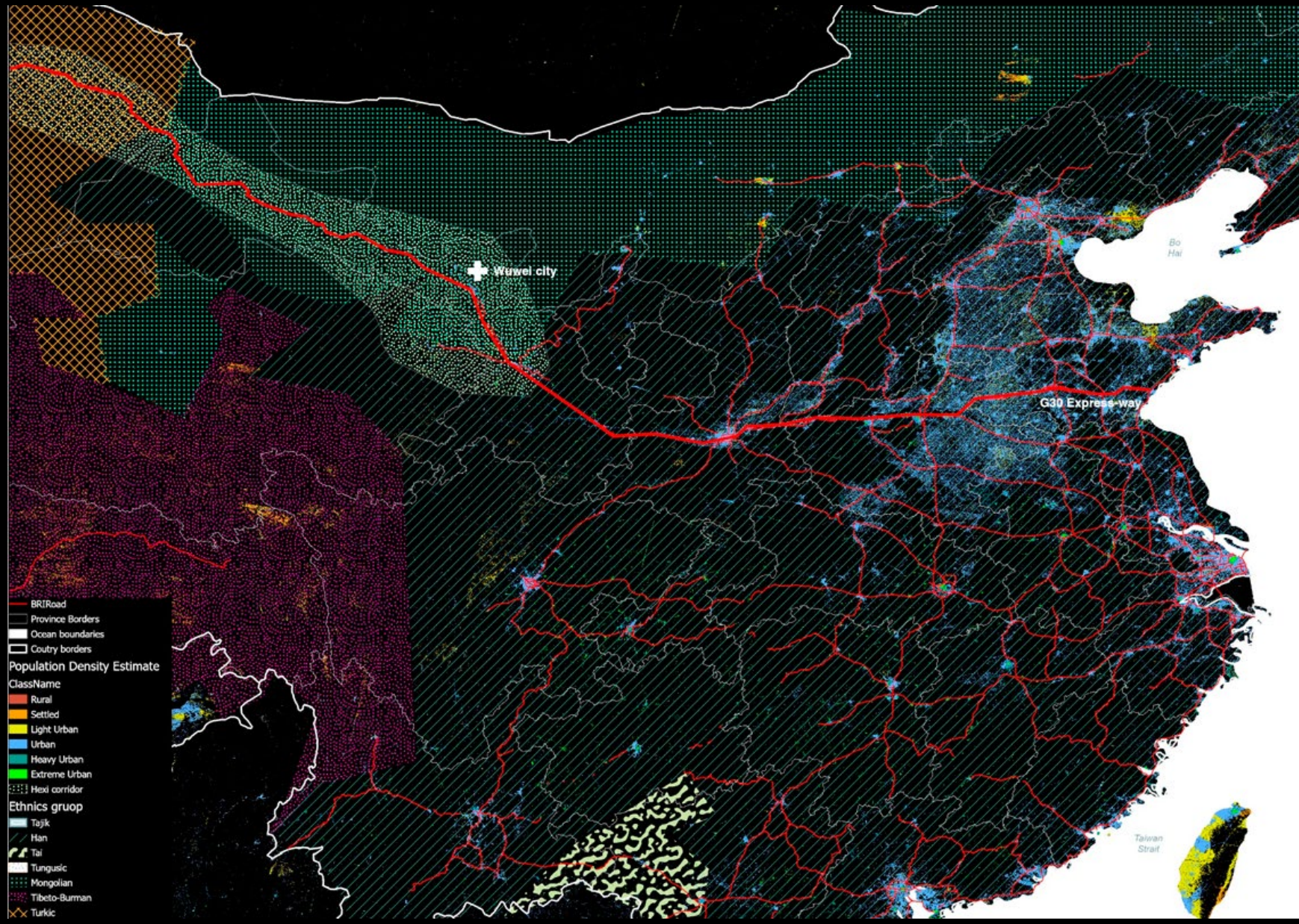
Although desertification is both an ecological issue of national and local interest, the social consequences it generates mainly affect places near the Gobi. This needs to build a dialogue with global problems on a local scale highlights the importance of identity. The places around the Gobi and mainly the cities in Gansu are rich in local history and culture and constitute the main trace of the ancient Hexi Corridor.

According to Li, (2018) historically the Hexi corridor area is populated by different ethnic groups. In a sense, the Hexi corridor represents a microcosmos of China as a nation and the way it was formed helps to understand how the nation itself was formed. Gansu is home to 38 ethnic mi-

norities (Li, 2018) with a 91% Han majority but with some areas totally inhabited by other ethnicities including Hui, Tibetan, Kazak, Yugur, Dongxiang. (Xu, Eiweida, Zheng, Xiao, & Zhao, 2018) Despite its cultural diversity and historical and current importance for trade, Gansu is one of the least developed and poorest provinces in China. According to the 2017 Gansu yearbook, the per capita income was only USD 4,300 compared to the national average per capita income which was USD 8,800. In addition to economic disparity, Gansu has a strong urban-rural disparity and also a lack of infrastructure development. However, since 2016, urban development in the province, particularly in the Lanzhou area, has been growing much faster than the population. Intense urban operations for an image of modern China even in rural and remote areas. Kipnis (2012) defines this process as a contemporary Chinese-Nation building in order to overcome local differences. This construction of a common Chinese identity today takes place through various social arenas including system standardization, the spread of the internet, and the built environment. Most urban programs replicate the same recipes with large housing, monumental square systems, and shopping malls.

The construction of these new urbanities, Kipnis (2012,734) explains, "includes any activity, planned or not, that increases the degree of commonality in lived experienced and communicative practice among people living in a particular country, especially those that simultaneously help to bridge local differences and to distinguish citizens of one country from those of another, but also including those that increase commonality across both the country and the globe." Thus, the construction of the new identity passes

The map shows the relation that exist between Gansu province and Wuwei with the logistic infrastructure. In particular in this representation the road system is highlighted and, specifically the G30 route , which pass through all the china mainland and it is the only way to exit towards the western provinces. In between of them there is the Gansu province that acts as a medium between east and west. Moreover, the historical zone of Hexi corridor is highlighted, to show the importance of that zone from a cultural point of view, where different ethnic groups live.



of a common nation leads to the cancellation of existing places in favour of new modern spaces. Thus, the fragile areas of the Gobi desert, the rural villages, and the medium-sized cities of Gansu, if framed within a national vision, are not benefited by the national and global results of such a vision. One policy program that can fit into Kipnis' idea is the BRI.

The program has entered the political narrative language since its inauguration. The pursue of China Dream through new urbanization that can offer a prospoerous fullfillment of people ambition. (Taylor, 2015) Rhetoric that looks inwards, such as the development of remote regions, but also outwards to improve its own trade and create new ones. However, the BRI with its peculiarity of connecting on a physical level, simultaneously, three worlds (local, national and global) can offer a new identity to these places, offering them not only the possibility of being preserved but also the possibility of playing a role in the future.

These issues offer food for thought for the BRI project, as generative and not just speculative about places. Some solutions can be provided within the BRI space to give substance to possible alternatives. Scenarios, therefore, in which the BRI has its own body and offers an answer to these ecological and social problems. Places, therefore, are no longer passive subjects of the global logistics project, but active participants, producing and generating wealth.

The BRI project is thus transformed from a repetitive model such as port-park-city (Liu, Schindler, & Liu, 2020) and

becomes an architecture with its own identity, attentive to the global dimension but also to the local dimension, which, as Hannerz (1990) said, are not distinguishable from each other but both feeds into each other to constitute an identity. The first in this case through logistics; the second, with a response to local threats for sustainable development of individual territories.

References

Cao, S., Tian, T., Chen, L., Dong,, X., Yu,, X., & Wang, G. (2010). Damage Caused to the Environment by Reforestation Policies in Arid and Semi-Arid Areas of China. *Ambio*, 279-283.

Farley, K. A., Jobbágy, E. G., & Jackson, R. B. (2005). Effects of afforestation on water yield: a global synthesis with implications for policy. *Global Change Biology*, 1565–1576.

Hannerz, U. (1990). Cosmopolitans and Locals in World Culture. In M. Featherstone, *Global Culture* (p. 237-251). London: SAGE.

Jiang, H. (2016). Taking Down the “Great Green Wall ” :The science and policy discourse of desertification and Its control in China. In R. B. Mortimore, *The End of Desertification?* (p. 513-536). Berlin: Springer.

Kipnis, A. (2012, August 1). Constructing Commonality: Standardization andModernization in Chinese Nation-Building. *The Journal of Asian Studies*, p. 731–755.

L.Lee, H., & Shen, Z.-J. (2020, June 1). Supply chain and logistics innovations with the Belt and Road Initiative. *Journal of Management Science and Engineering*, p. 77-8.

Li, J. (2018, 12 13). *Multi-ethnic Hexi Corridor helps explain formation of Chinese nation.* Tratto da csstoday: http://www.csstoday.com/Item/6254.aspx

Liu, Z., Schindler, S., & Liu, W. (2020, July 29). Demystifying Chinese overseas investment in infrastructure: Port development, the Belt and Road Initiative and regional development. *Journal of Transport Geography*, 1-10.

Nieuwenhuis, M. (2016, May 16). *China's desertification is causing trouble across Asia*. Tratto da The Conversation: https://theconversation.com/chinas-desertification-is-causing-trouble-across-asia-59417

Stanway, D. (2021, June 3). *China farmers push back the desert one tree at a time.* Tratto da Reuters: https://www.reuters.com/business/environment/wider-image-china-farmers-push-back-desert-one-tree-time-2021-06-02/

Taylor, J. R. (2015, 24 May). The China Dream is an Urban Dream: Assessingthe CPC ' s National New-Type Urbanization Plan. *Journal of Chinese Political Science,* 107-120

Wen, X., & Mao, W. (2021, May 4). *Key transportation link*. Tratto da China Daily: http://global.chinadaily.com.cn/a/202105/04/WS6090b356a31024ad0babbe4b.html

Wong, E. (2016, October 25). *Resettling China's 'Ecological Migrants'.* Tratto da Newyorktimes.com: https://www.nytimes.com/interactive/2016/10/25/world/asia/china-climate-change-resettlement.html

Xu, L., Eiweida, A., Zheng, J., Xiao, Y., & Zhao, H. (2018). *Economic Geography Analysis of Gasu Province*. Washington: World Bank.

4

SCE-NARIO FOR AN UTOPIA

In the previous chapters we have seen the spatial and architectural effects of the Belt and Road Initiative and its repetitive formulas. In this chapter, I will propose a new scenario for an architecture of the BRI.

According to Tafuri (1976)[1] the project as utopia has been always part of the history of architecture, between his failures and his accolades. The word utopia originated with More in 1516, who presented his ideal society as being on a distant 'island of Utopia'. Since the Renaissance, utopia has taken on the ambition of a project in architecture. The new cities, as models of new societies and powers, derive their reality from being utopias first. Going forward, utopia, in its visions, increasingly intertwines politics, society and built space. This is the case with 19th century utopian socialism. The growing awareness towards the industrial development of the city, generates movements of thought and new models and proposals for a new society. One example is Charles Fourier's phalansterie, which was intended to house a maximum of 1,800 inhabitants in community buildings, rationalising resources and production activities. Other proposals of this movement can be read in Robert Owen's *New Harmony* or Jean Baptispe Godin's *familinsterio*, the latter realized in the wake of Fourier's ideas. (Montanari 2019)[2]

Utopia opens up new scenarios and possibilities at the crossroads between politics and architecture, considering the progress and conditions of society. At the beginning of the 20th century, the utopian project thus took on a strong political connotation, which would later be joined and supported by artistic and cultural movements, which

would broaden its field of action. Utopia, as Tafuri (1972) understands it, presupposes an ideological concept which, however, is, in its turn, limiting and limited by the reality of the society, of its evolution and by capitalism. For Tafuri, utopia fails in its essence because it is tied to a temporarily accepted ideology. However, utopia in architects' practice has always represented the fascination of new urban visions and has given a sense of hope to architecture itself as a projection of the future.

The scenario for a new architecture of the Belt and Road Initiative builds on the reality observed in the previous chapters. Its urban effects and contemporary challenges. Utopian architecture is not intended to be a historicist reference to the utopias of the past, but to adapt the BRI urban design tool to its aims, which are utopian but possible. So if possibility lies in utopia, why can't the possibility of a new architecture lie in the BRI?

The proposed scenario looks at the current reality of spatial effects and re-elaborates their forms and spatiality. In fact, if today we see a repetitive formula already described in the previous chapters, it is because of its functionality. This functionality is not altered but re-proposed by shifting the point of view. The main actor of the BRI is not man, the person himself, but the goods he produces. Global logistics. Giving an architectural body to the BRI means giving a body to logistics, to machines. Automation, shipping standards and the rules of logistics offer interesting ideas for a conceptual reworking of the port-park-city into what I call Cargo City.

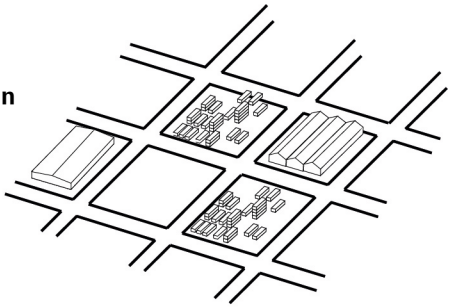
The cargo city is developed on the urban models currently used in the BRI: a movement grid that offers a division of the soil into lots each with its own function. However, most functions are common to several projects and concern logistics and production. Moreover the use of warehouses as storage of the container is a recurring element. The Cargo city therefore takes its form from its functions and its road system, which from 2D becomes 3D.

The logistical functions are inserted in logistic walls, that separate and make autonomous the inner areas, allowing a free and not bound development of the single areas. Each area can be considerate an island. The logistic walls are connecting and dividing the Cargo city offering an experience of a new urbanity where man is no longer at the centre of the project but his product and therefore the global consumption of the product in an Other place. The distinctive shape of the cargo city recalls the symbol Ren, which in Chinese writing means person but also people. The symbol ren is taken as a distinctive container of logistics, which thus establishes a formal and functional relationship. The BRI citizen, out of the centre of the project, is defined by the forces of logistics in such a strong way that they are housed within themselves. The absolute forces of capital define a man-commodity-consumer identity relationship that in the BRI sees its social, economic and political background.

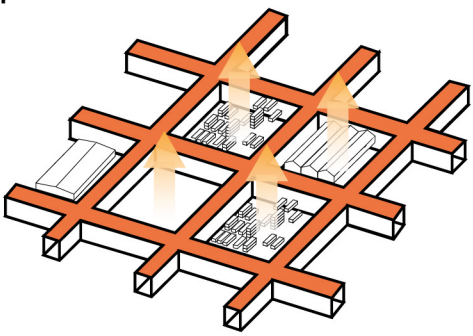
1 Tafuri M. (1976), *Architecture and Utopia Design and Capitalist Development,* Cambridge, the MIT Press
2 Montanari G. (2019), *Una storia dell'architettura contemporanea*, Torino, UTET

DIAGRAMS

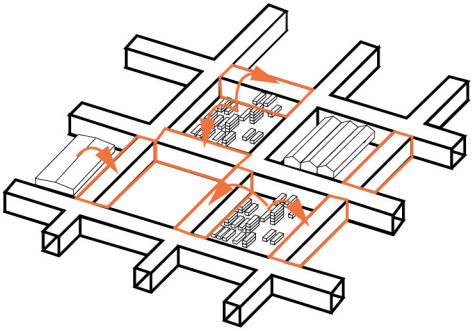
Standard urban plan

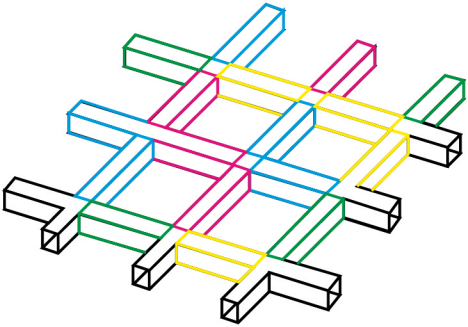


Void as full

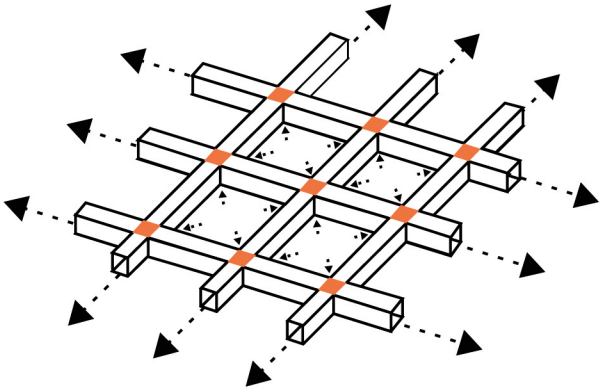


Filling with logistic



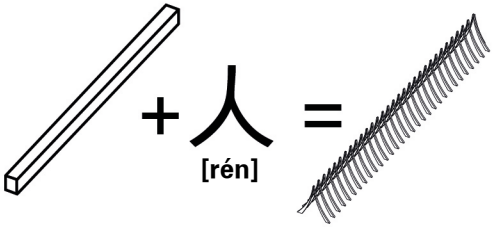


One block
one function

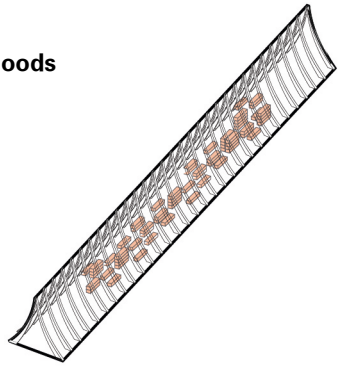


Circulation

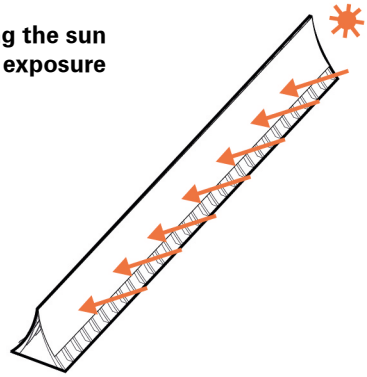
building meets "man"



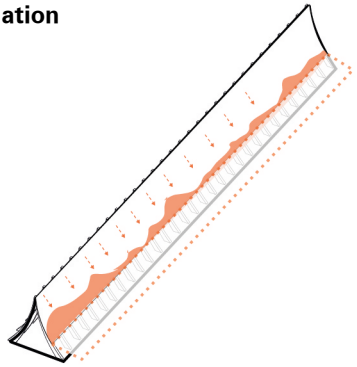
hosting goods



improving the sun exposure



avoiding sand accumulation

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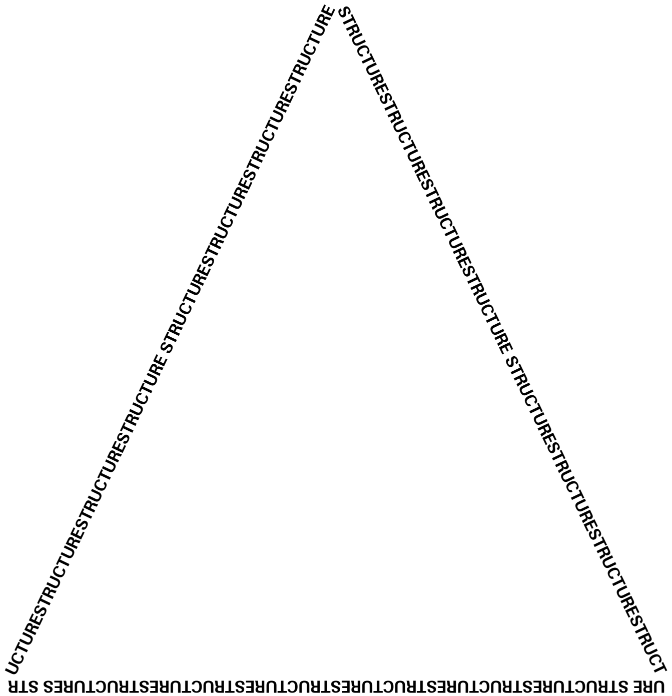
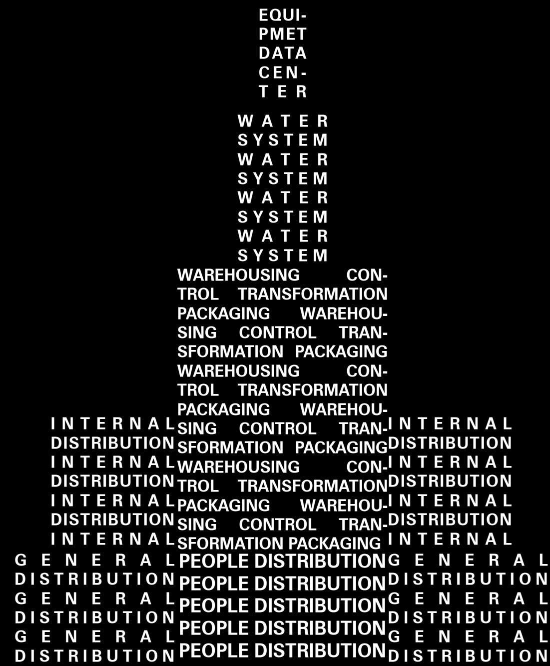
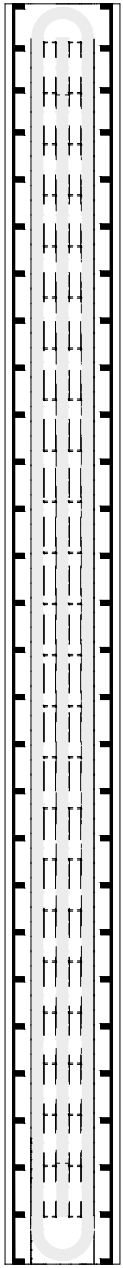
WHAT'S INSIDE?



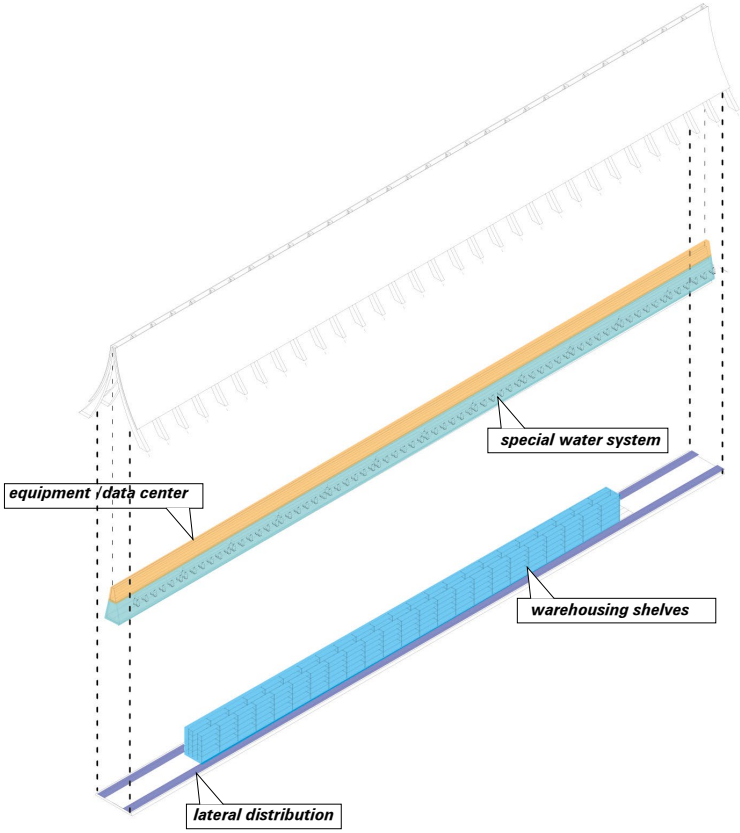


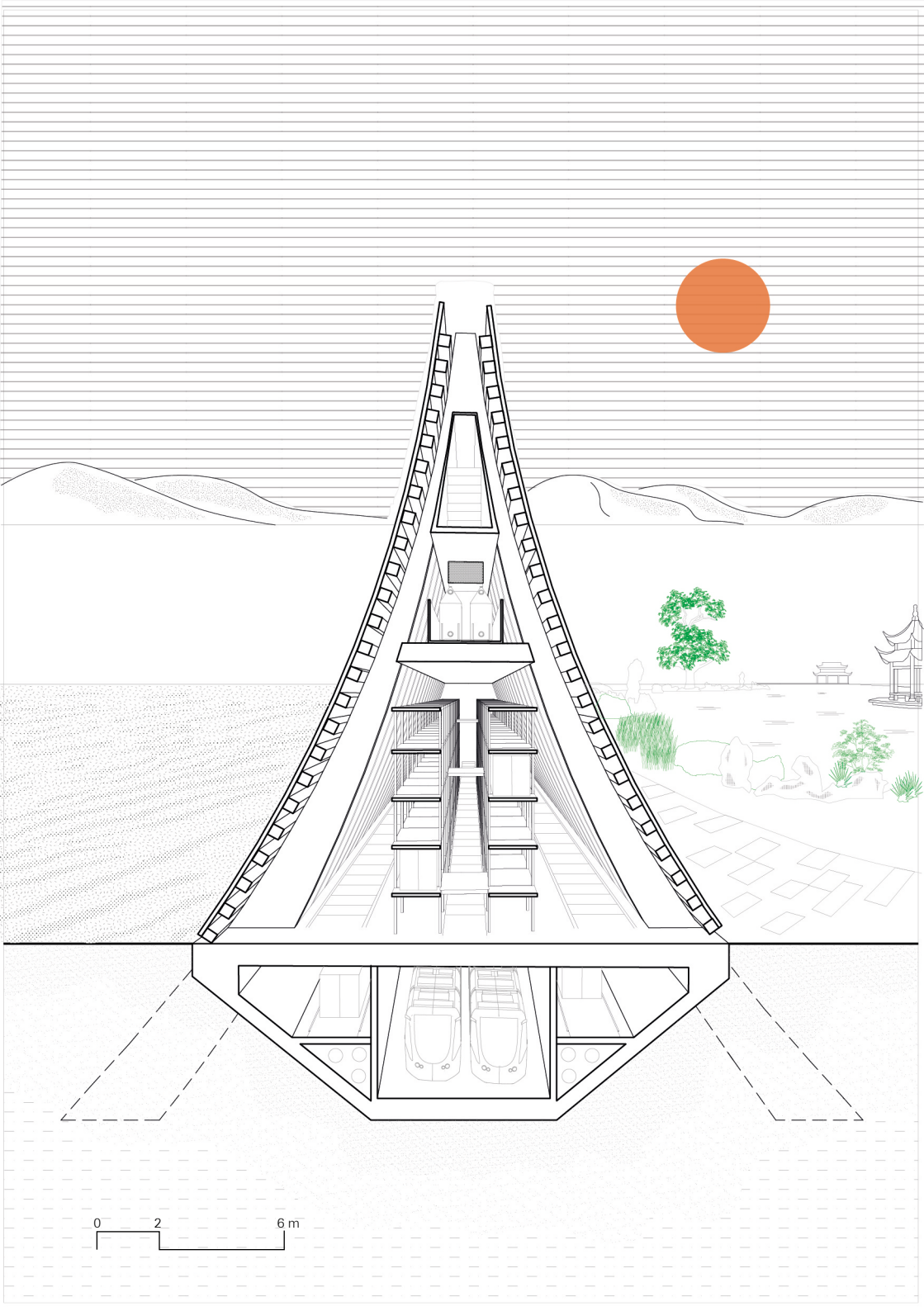
The storage and warehousing of goods is an integral part of the logistics chain. According to Rushton, Croucher, Baker (2014)[3] wharehousing is one of the main components of the inventory area together with the control of goods. From the case studies previously reported, it is evident that wharehousing occupies a considerable part of the logistics functions. Not only that, each company within the same industrial park has its own connected warehouse, thus increasing the required floor space. The wharehousing machine proposed here involves the vertical insertion of containers, each for one shelf. The internal distribution is guaranteed by automated platforms that move the cargo between the general distribution on the side and the internal distribution. This machine can be placed anywhere near the external infrastructure. The storage includes both goods to be shipped out of the cargo city and containers going in.

GROUND FLOOR



PROGRAM


special water system
equipment / data center
warehousing shelves
lateral distribution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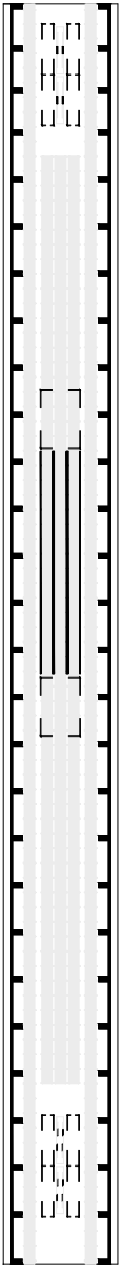
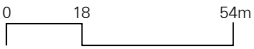
6 m

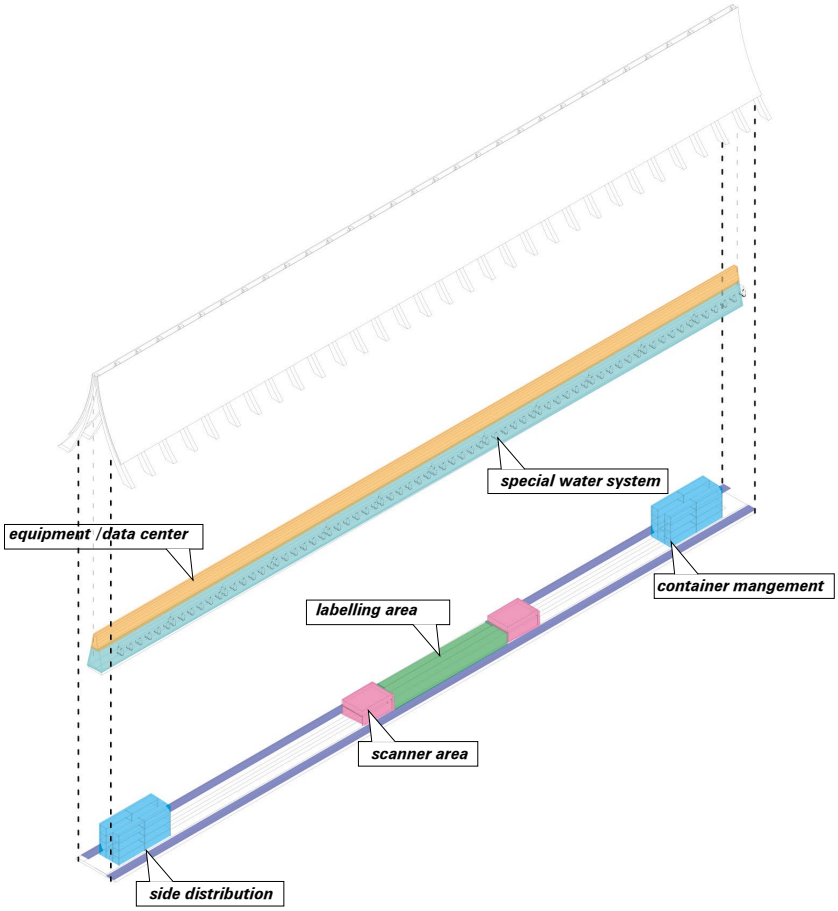
As mentioned before, the function of controlling containers and their classification is the other main element of the inventory area. Here, containers are only passing through and do not need to be stored. Freight containers pass through scanners in which they are inspected and classified according to their contents. This step is important, especially at the entrance, so that each individual container can be labelled for its respective destination within the cargo city. A system of mobile platforms located at the entrances manages the flow of cargo from the lateral to the central internal distribution.

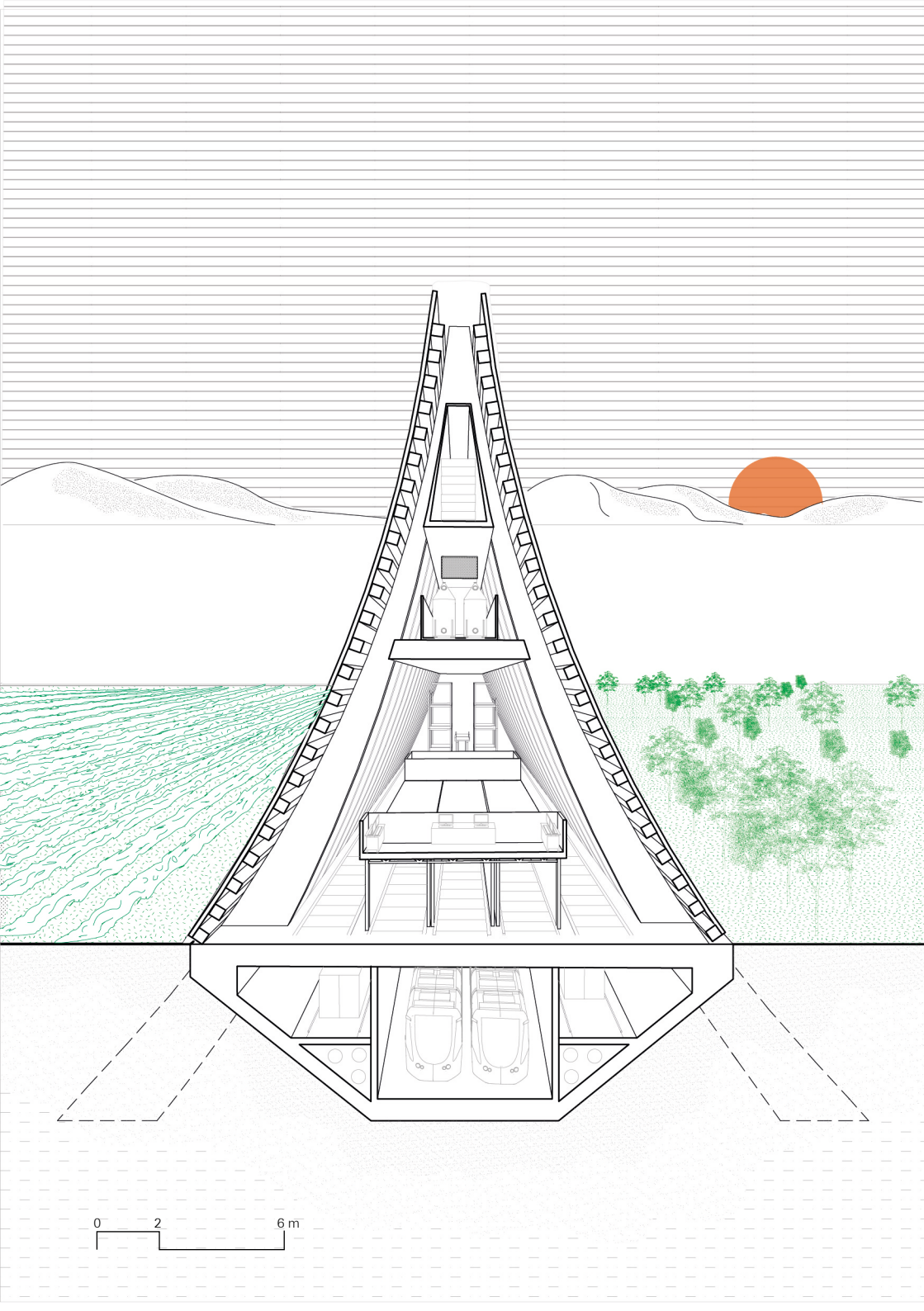
GROUND FLOOR





PROGRAM


special water system
equipment /data center
container mangement
labelling area
scanner area
side distribution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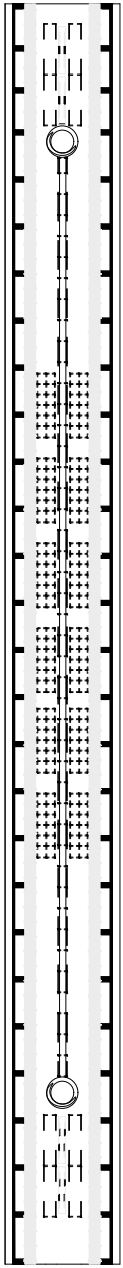
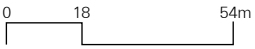
The packaging of goods is not a question of marketing. A distinction must be made between packaging for the end consumer and packaging for transport. Goods that arrive or are produced have to be repackaged in the most efficient way. Here the architectural dimensions of the machine are smaller, because the containers are only used as the final destination. The containers are emptied of the goods, which are placed in channels. Each channel passes through a structure with rollers that pack the goods in series. The machine can be set up for various requirements. At the end, the products are placed in empty containers ready for the control.

GROUND FLOOR





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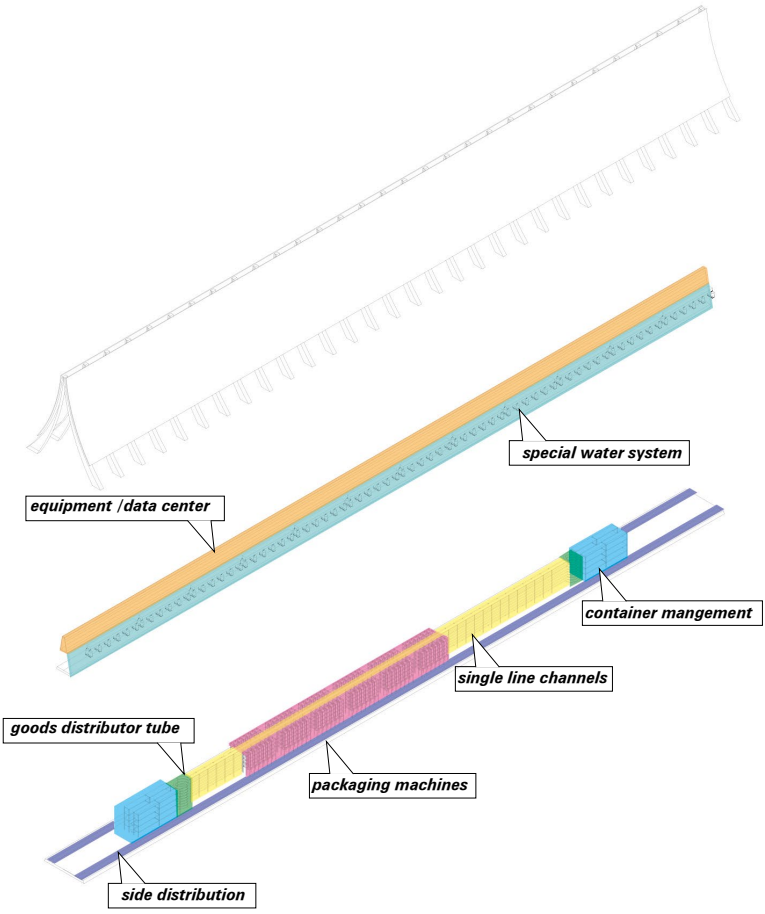
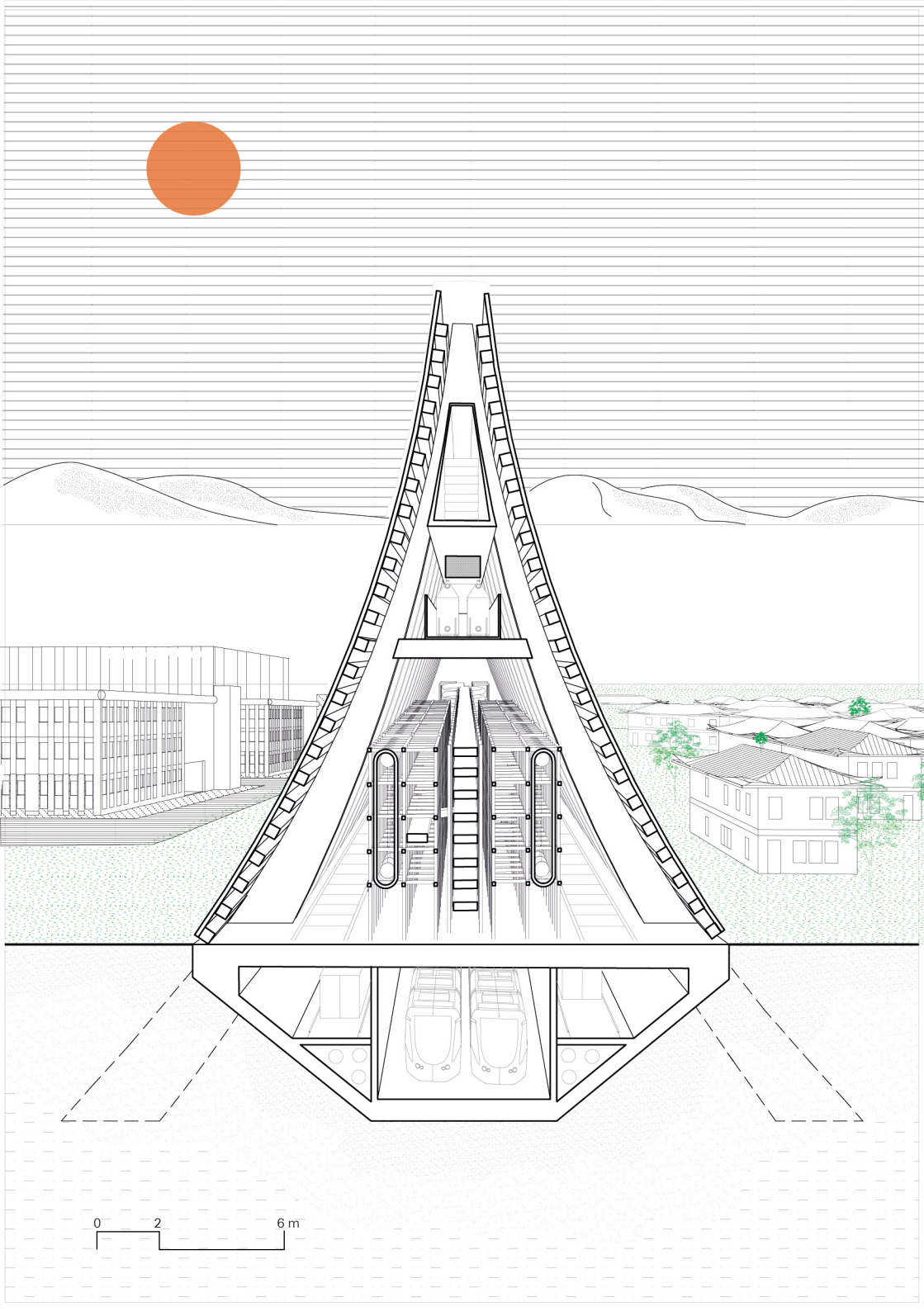

special water system
equipment /data center
container mangement
single line channels
goods distributor tube
packaging machines
side distribution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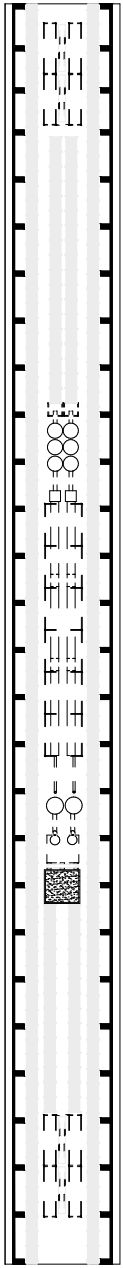
6 m

The machine for processing semi-finished products is not always present in logistics. However, it is not only logistics in the narrow sense that is present in BRI. In industrial parks, there are also manufacturing companies that produce goods. Therefore, one has to look at the supply chain which, according to Rushton, Croucher, Baker (2014) encompasses the functional areas of logistics by adding also the management of raw materials and the production of semi-finished products. This machine increases the production capacity of the cargo city, which thus becomes an active player and not just a distributor of products. The layout of the logistics wall aligns the main activities for processing raw materials in sequence. The resulting products are stored and subsequently returned in temporary containers.

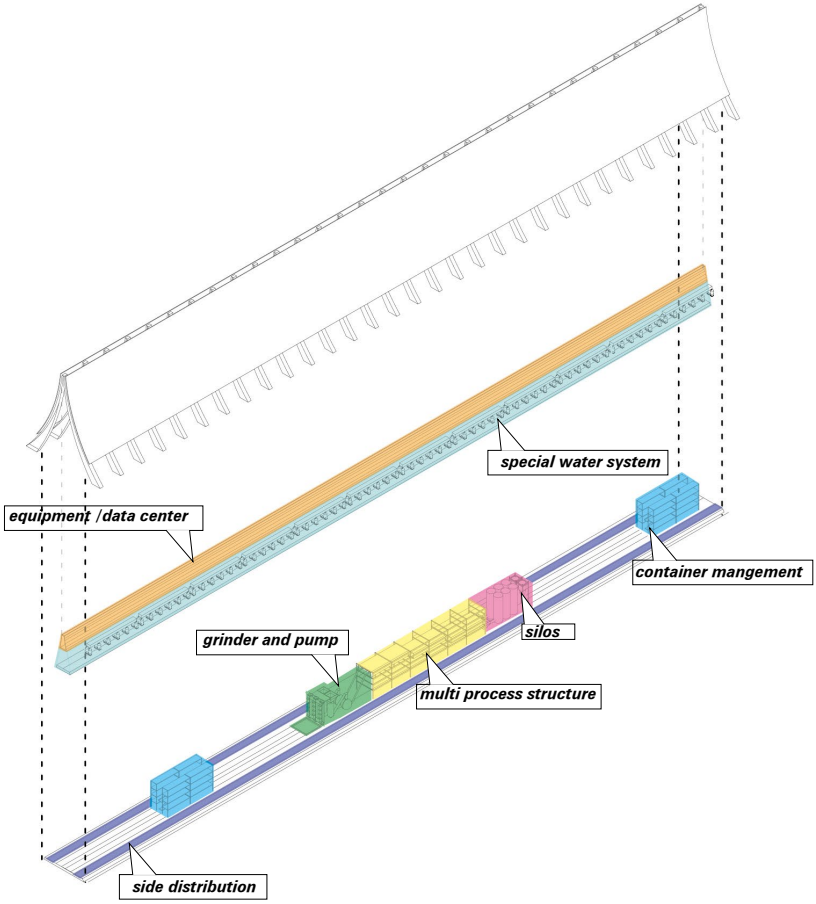
3 Rushton A., Croucher P., Baker P. (2014), *The handbook of Logistics & Distribution Management,* London, Kogan Page

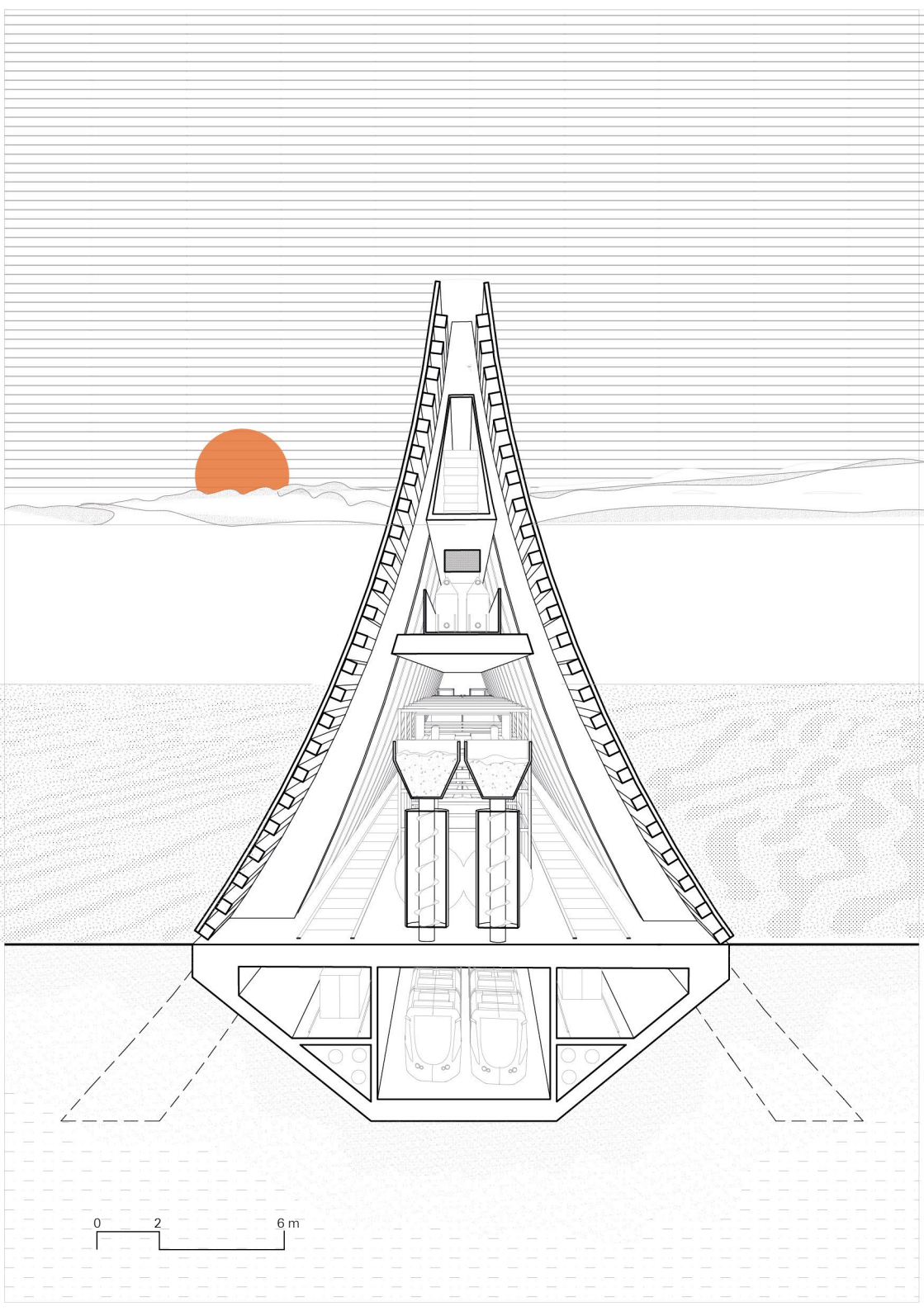
GROUND FLOOR



0 18 54m

PROGRAM


special water system
equipment /data center
container mangement
silos
grinder and pump
multi process structure
side distribution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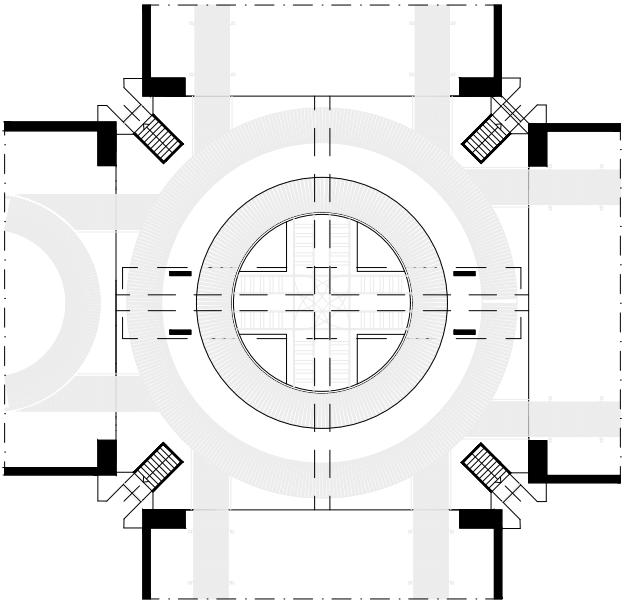
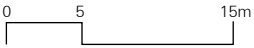
LOGISTICAL WALL

INTERCHNAGE NODE

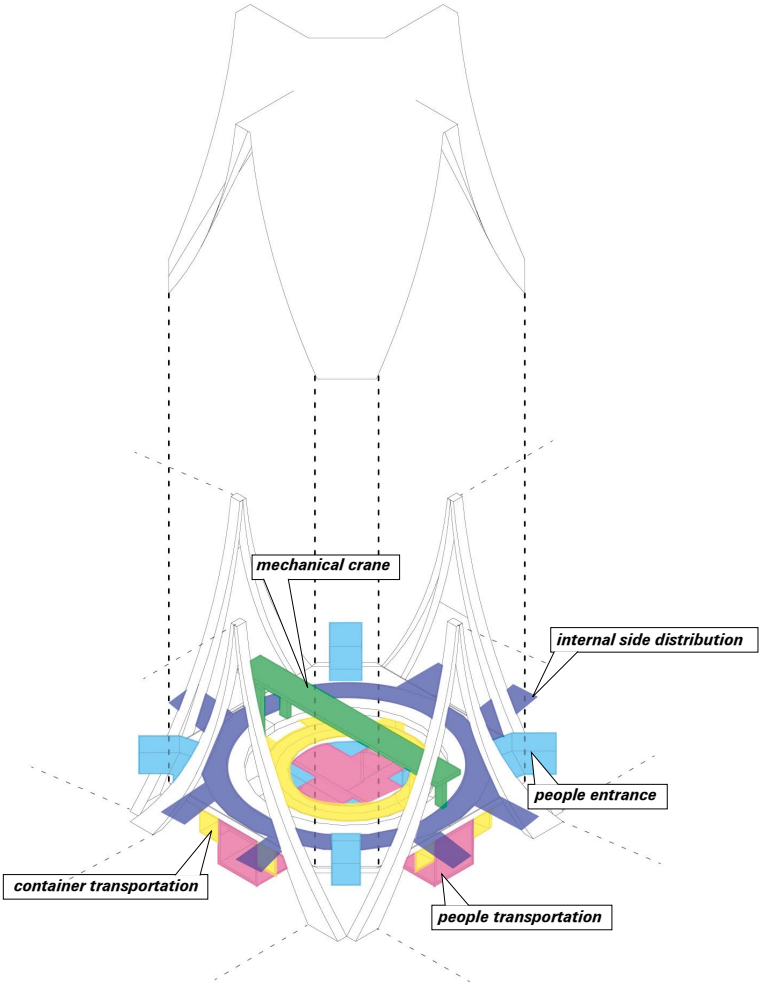
The interchange is essential for the movement of containers and also of people. Structured on different levels, people and goods never meet. The node serves as a real station where people can move from one area of the cargo city to another by underground trains. Containers travel on a general underground route to facilitate their movement on the general network. When a container arrives at the node where the destination logistics wall is located, it is picked up by a mechanical arm. The container is then positioned at the level of the logistics walls. People start at the corners of the node and descend directly to the underground station. A void in the centre of the node provides visual communication between people and goods, making the machine spectacular. The interchange points are the only accessible points to move around the cargo city.

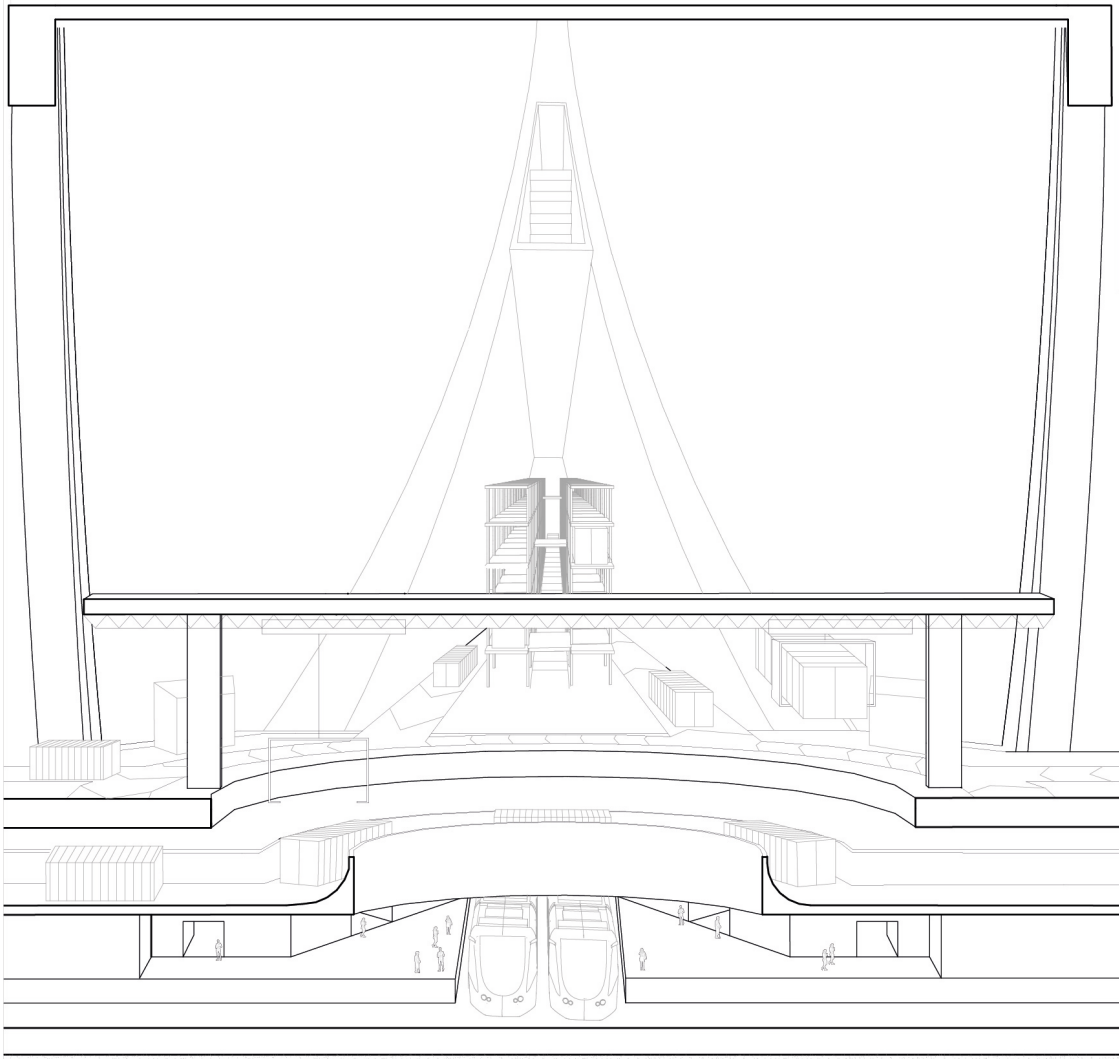
GROUND FLOOR





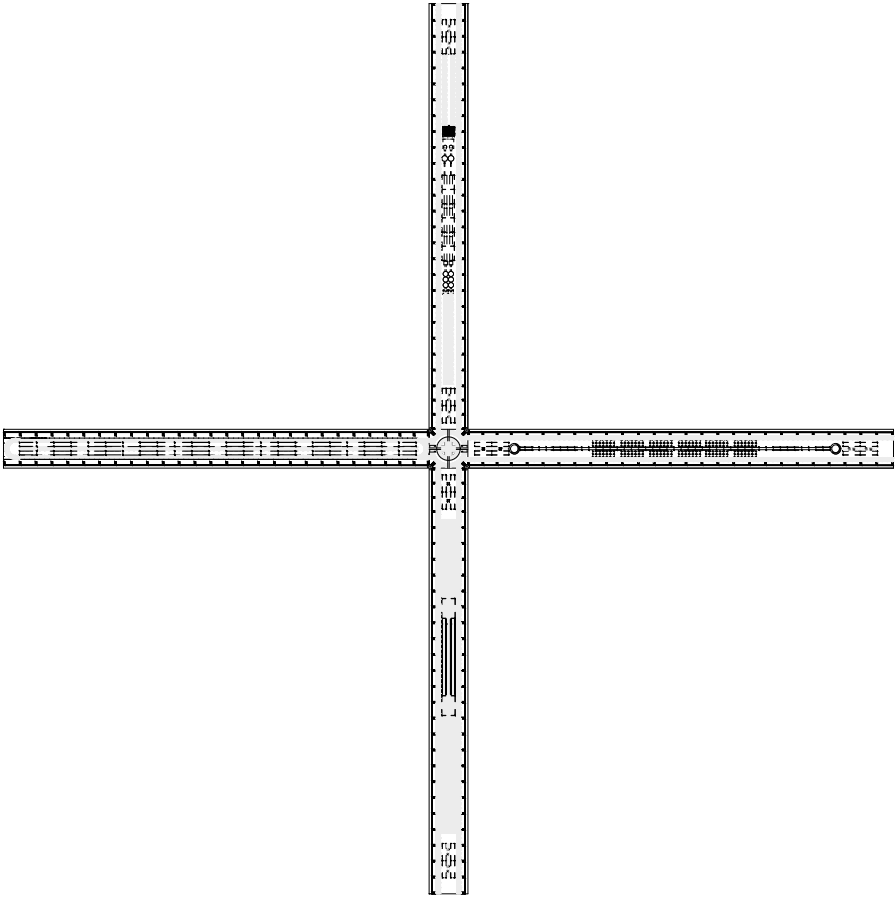
PROGRAM


mechanical crane
internal side distribution
people entrance
container transportation
people transportation



0 2 6 m

GROUND PLAN ASSEMBLED



0 50 150m

The Form proposed is not responding just to a global identity.

Locally, the Cargo city offers various opportunities. In the case proposed in Wuwei I took the agricultural issues and the desertification as the main problems. Indeed Wuwei is well known for its agriculture sector, as many other cities in the Hexi Corridor. Wuwei city, even though is located along the G30 route is suffering for and absence of logistical zone. Indeed, the local agricultural production is out from the global logistic chain. The opportunity of enstabilish a Cargo city close to Wuwei offers a possibility to link the local production to the global consumption and also offer a boost for economic development. On the other hand the continuous desertification by Gobi Desert is putting under pressure the arable soil. Desertification is a serious problem that affect Wuwei and not only.

In the seventies, China launched the great green wall against the desertification of the Gobi. The program, consisting of several stages, involves planting a belt of trees at the edge of the Gobi to slow desertification. However, as already described in the previous chapter many are the cliques of this program and its effectiveness since in any case the desertification continues also due to climate change.

The cargo city with its grid system offers a division and protection of the ground from the wind. Although the grid system is derived from road grids, it offers the ability to fragment the desert into small portions, scaling the concept of prevention applied in [fig. 1]

In addition, by using a system of water recovery from the humidity of the air and the temperature difference between day and night, it offers the possibility of transforming the land consumed by desertification into new arable land, returning the land to local farmers.

So Wuwei offers hope for other cities along the Gobi Desert, and the BRI project takes on new local instances that dialogue with in the sense of places, communities and environment.

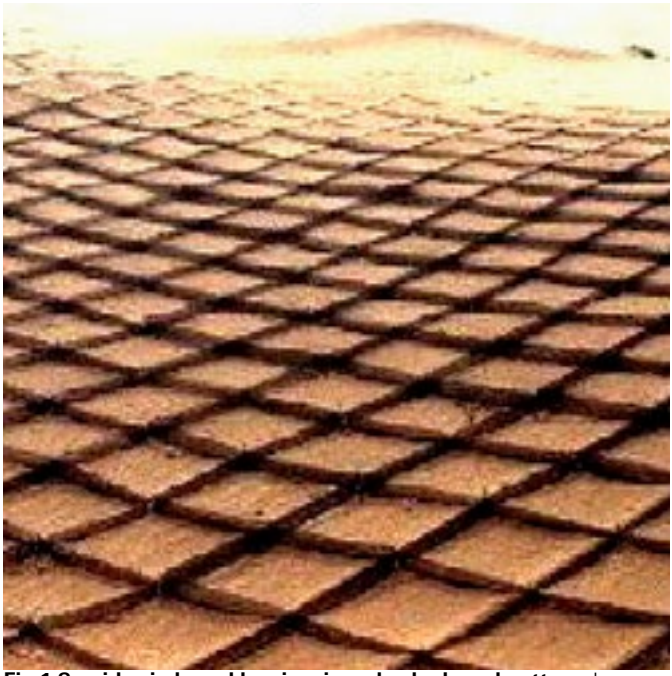
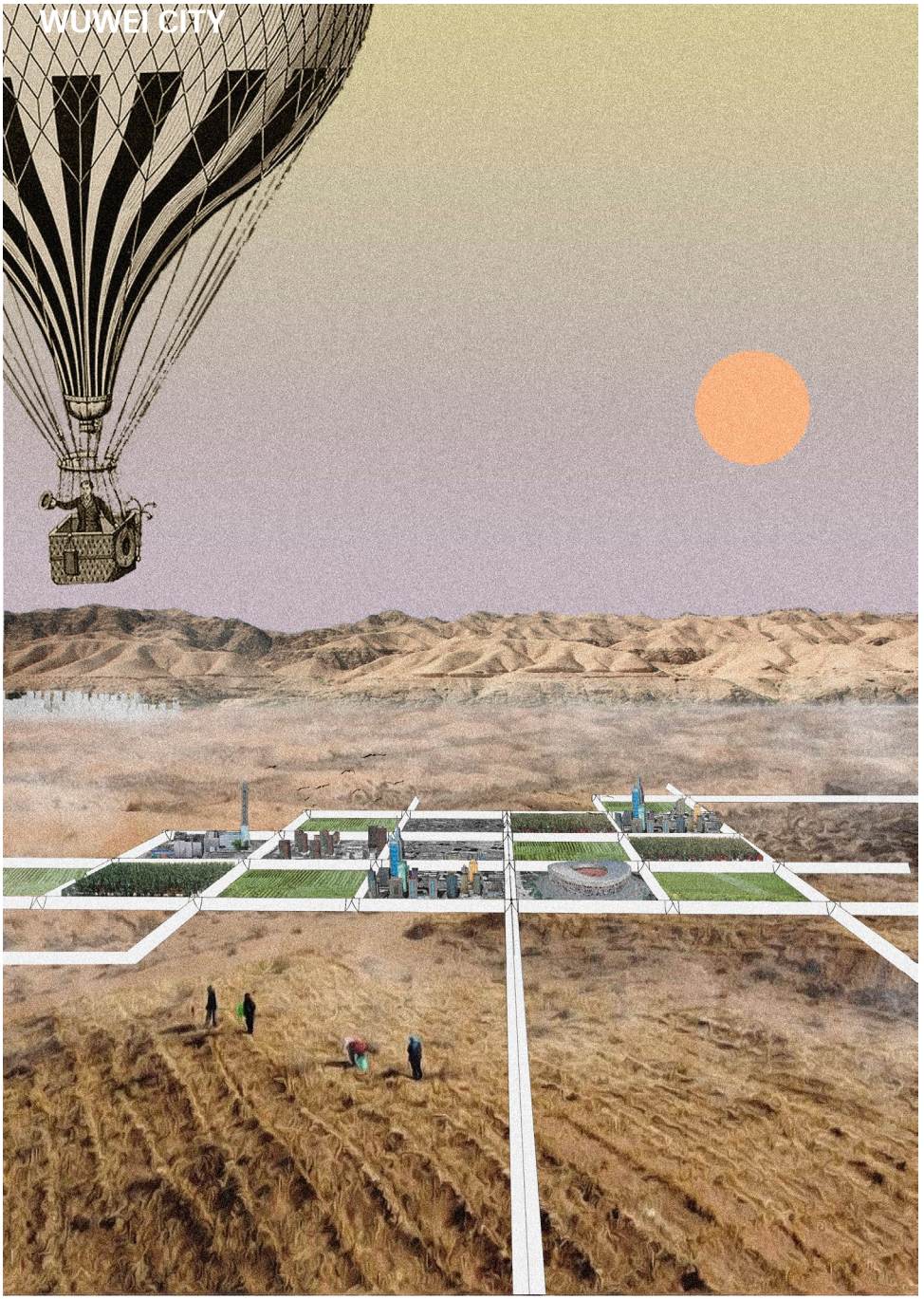
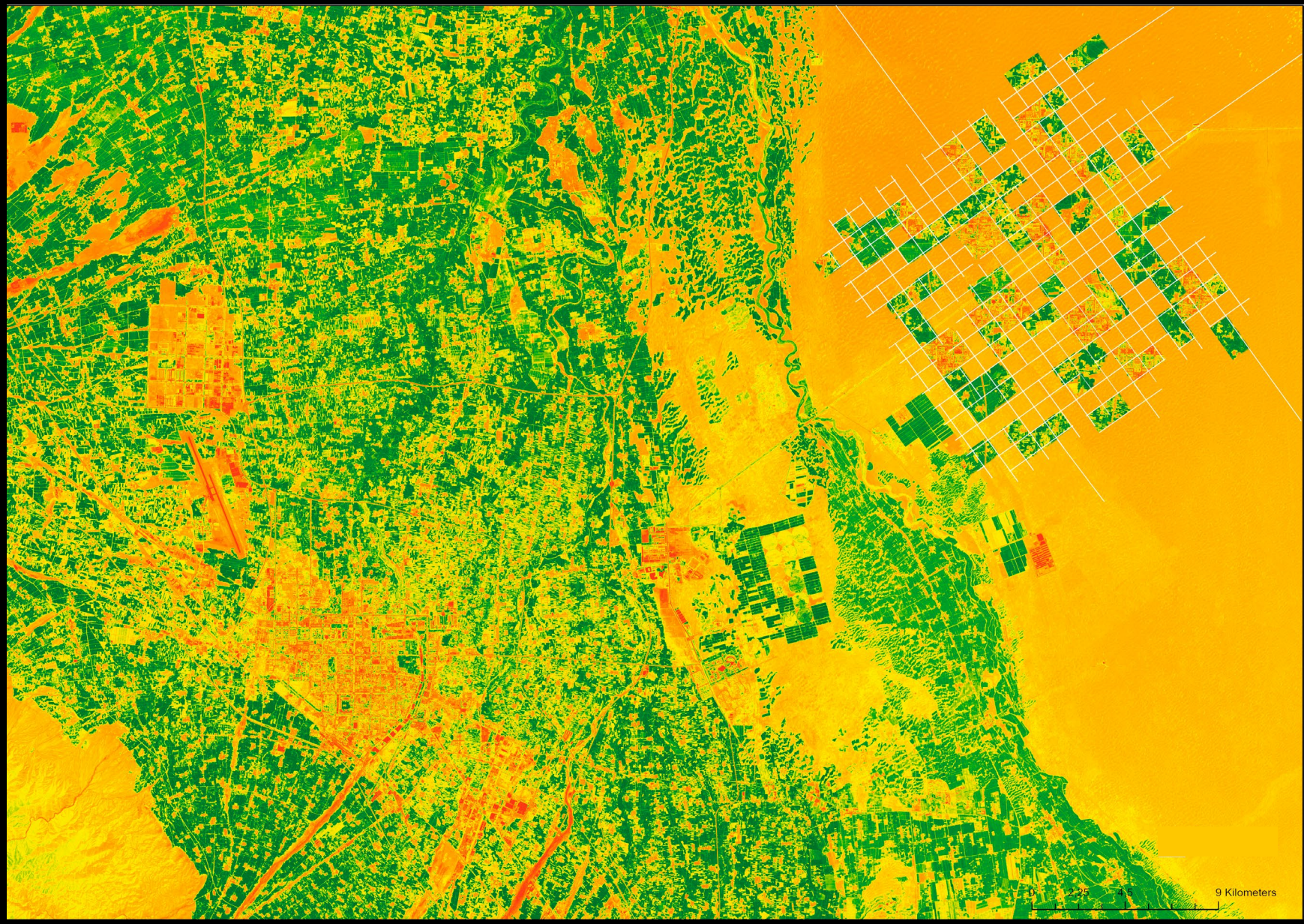


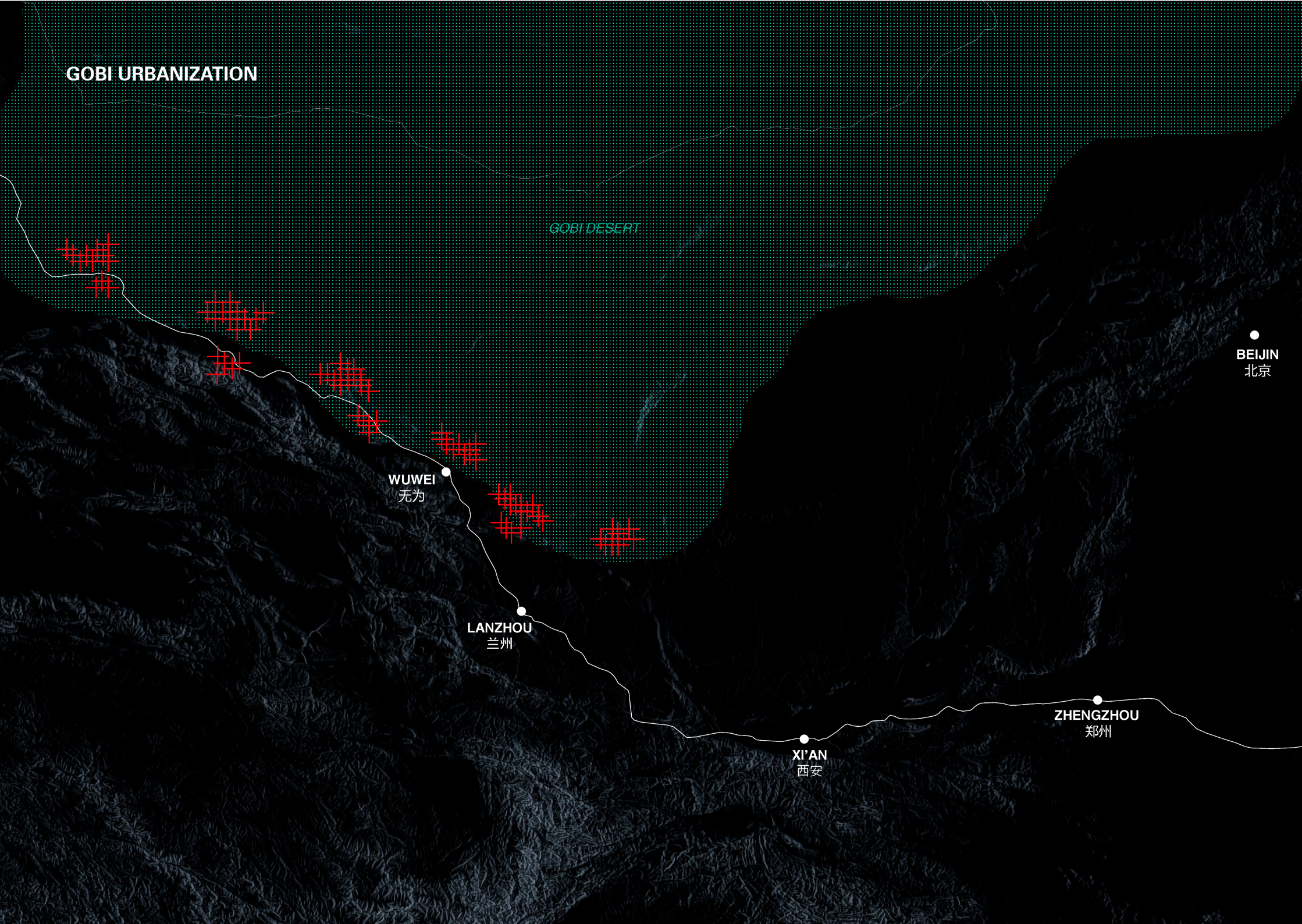
Fig.1 Semi-buried sand barriers in a checkerboard pattern. In Jianjun Qu, et al. (2007) Field observations on the protective effect of semi-buried checkerboard sand barriers, *Geomorphology* , 88:194


WUWEI CITY

WUWEI CITY

The map shows the normal difference vegetation index of Wuewei area. The result has been coloured to highlight the difference between the grassland (greenish) and the consumed /desertic soil (yellowish). The situation of Wuwei is similar to many cities close to Gobi where the arable land is shrinking due to desertification. The cargo city planned just at the edge of the desert may create new plot of former arable land offering a new horizon for local farming. The cargo city can be used as antidesertification device mending the contrast between desert-grassland and city. The cargo city it is always incomplete and linking other cargo city it may create a continious barrier.




GOBI URBANIZATION
GOBI DESERT
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WUWEI
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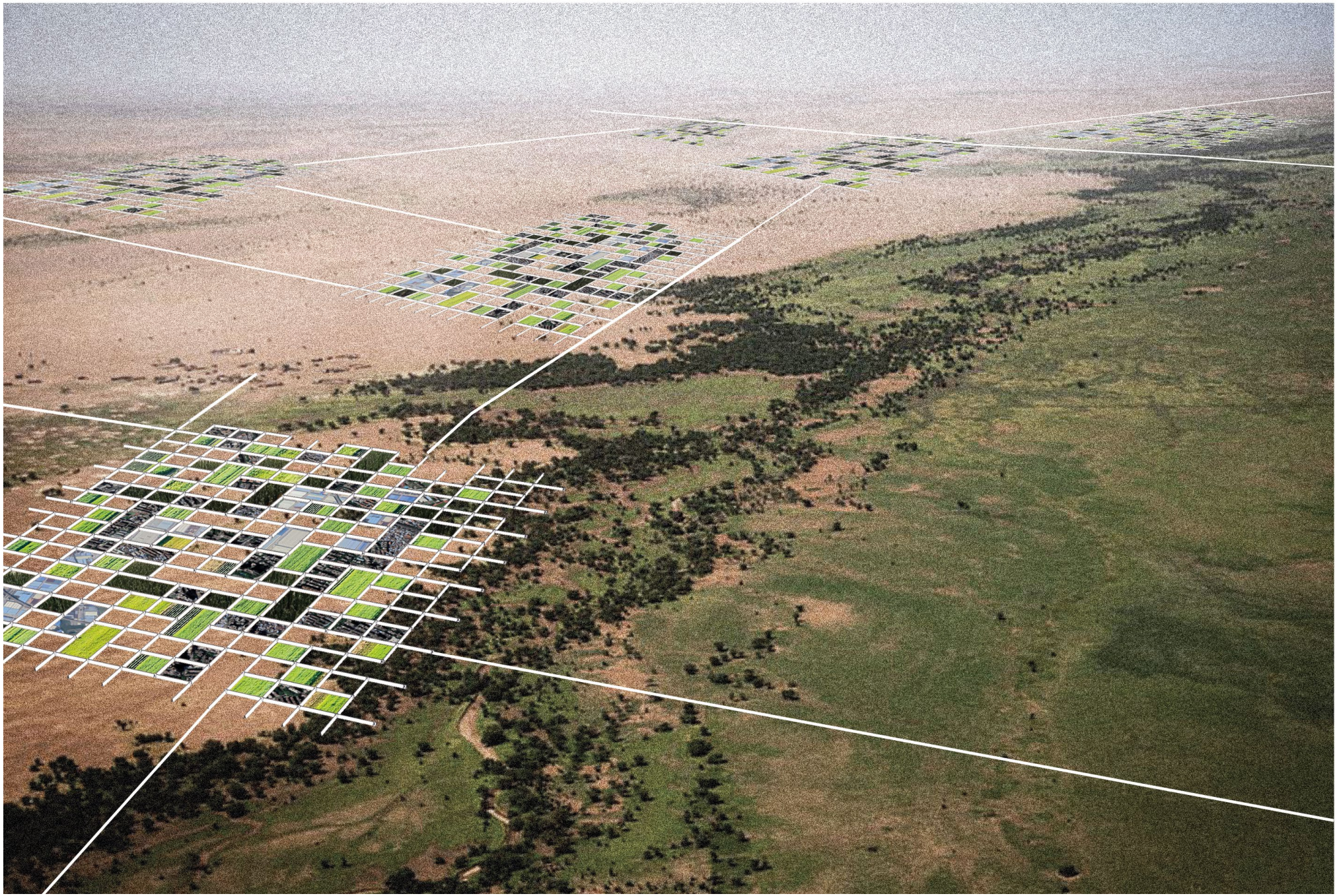
LANZHOU
兰州
ZHENGZHOU
郑州
XI'AN
西安



CONLUSIONS

Having reached the end of our journey, it is time to draw conclusions. But the question I ask myself is whether it is possible to draw conclusions from a project that is actually in continuous progress. However, this long multidimensional journey through the Belt and Road Initiative offers us the chance to look at new questions. The BRI is the name of a complex and articulated political, economic and social project that has just begun. From an architectural point of view, this programme offers the possibility to think about new urban hypotheses. Following what I showed, it would be limiting to talk about the relationship between man and machine, because this would be outdated.

The new challenge of the BRI is to hold together a complex network such as logistics, with the sense of inhabiting places. Today, the BRI proposes its industrial parks, special zones and hubs as elements of urban production. The BRI, its rules, the operational landscapes of capitalism. The innovative scope of this project is broad. It is being studied in finance, sociology, geography, political science, transport engineering and even, as we have seen, architecture. Yes, because to be able to propose an architectural utopia that evolves into a city is only thanks to the BRI's ability to open up new horizons. It is not a simple economic or development programme. As we have seen, the BRI can be seen as a federation of small "states" and projects around the world, each in its own special area. A federation of "states" that can be overlapped with the world's logistics

network, by sea and by land. This horizon opens up new opportunities for urban exploration.

Hybrid rules; subjects who are not citizens of a nation; architectures designed for cargo and not for men. These spaces accommodate a new sociality, always in constant transformation, just like a cargo ship that is there today and 3000 km away tomorrow. A common feature of the spatial effects of BRI is that it does not assume clear boundaries. Sometimes these boundaries are blurred by the services of the place, sometimes they seem to be well marked, but remain in suspense. This is so because most BRI case studies are located in logistically strategic but also poorly constructed areas. Therefore the BRI does not find another local presence, but builds the place on itself. On the other side of the boundary of the local area, there is often only land and scattered houses. These urban effects are reshaping the geography and territory of entire areas.

The case studies show how the repetitive urban recipe of BRI is limited to the construction of the place, without an integration with it, with the Earth. Another question is taking place between these lines. If the new urbanity of BRI is self-validating, i.e. self-constituting through software of rules, will it also be able to be self-disrupting? Does the BRI in a sense create cities or just territorial covers that look like cities? If the horizon of the BRI is wide, it is clear that the duration of this horizon must be weighed up. Scenarios such as mine offer a critical and suggestive insight into the contradictions of a project that has space and land as its medium, but whose aim is the consumption and political positioning of goods and services.

The contemporaneity of the BRI casts a new light on the environmental challenges and urban crisis of places increasingly consumed by mega centres. Urban responses in this sense can go beyond the concept of the new town and establish cities that may function as drivers of development in a global network. Integration with existing places and the environment offer interesting horizons for the development of this project, which does not have a house, a square or a social centre. Places that have at their centre a 24-hour operation. Is a place that is always operational, that is not strictly speaking a city, still a place of work?

The spatialisation of warehouses, logistics hubs, ships, trains and trucks marks a continuous time. In these new urbanities, the social dimension coincides with what we would call the working dimension. Architecture watches, it is a still scene, so can the BRI citizen be part of it?