

Urban vitality, fatum or fortuna?

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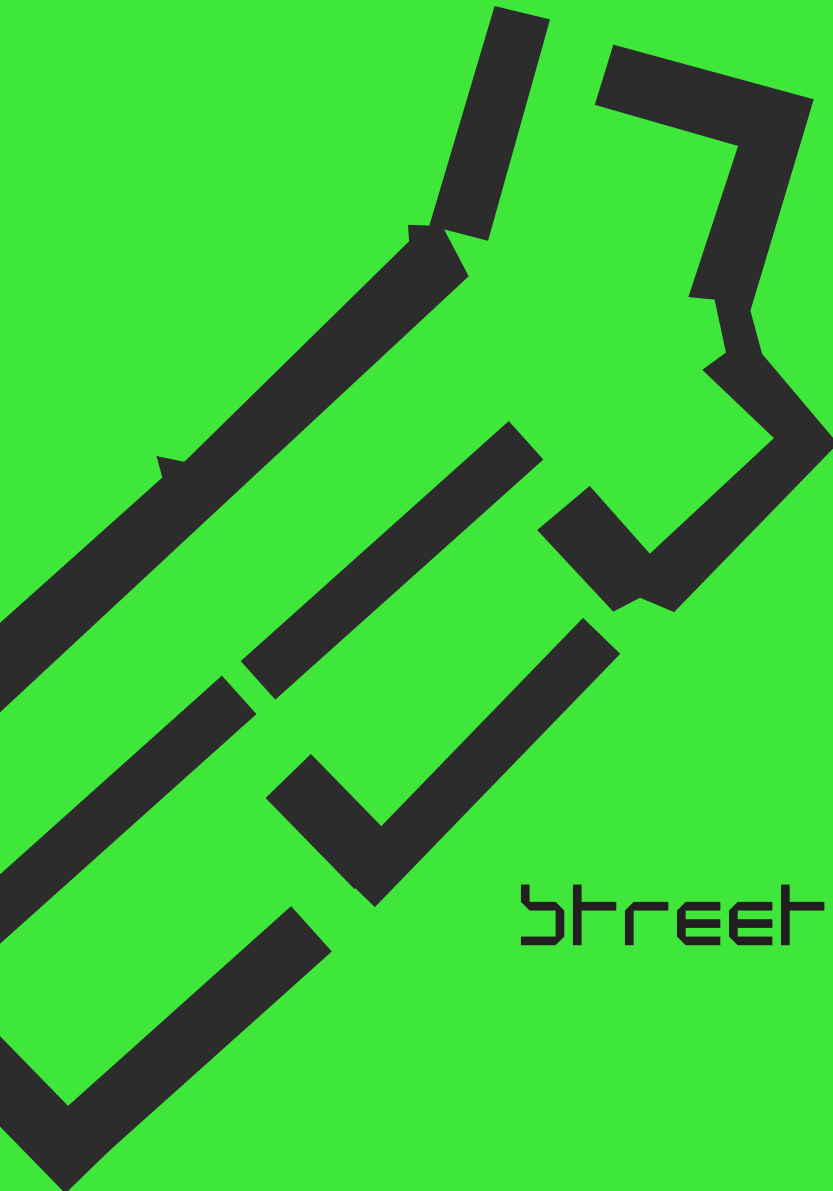
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Urban Vitality, fatum or fortuna?

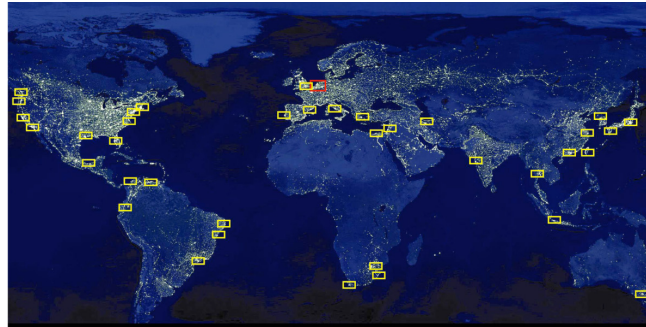
Urban structures do not appear just out of the blue. There is certain logic to a city structure and that structure, in my opinion, has been damaged. The right structures are insufficiently continued and implemented, and in new towns not automatically applied. The urban structure is being damaged by serial interferences that stand in the way of social, economic and societal vitality. The last couple of years I have, in co-operation with many others, developed an instrumentarium to make that visible through computer techniques. And how it is possible to apply that instrumentation to fortify vitality. In that process two things are very important: destinations and their connections. The better those function, the more vital the city can be.

Urban structures in transition

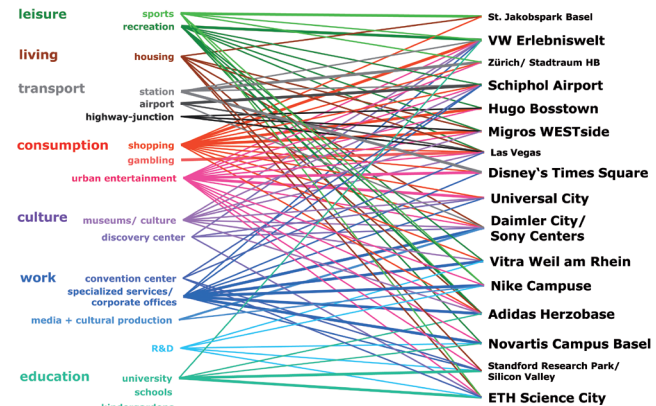
Cities are more and more the place where people reside. At this very moment 50% of all people worldwide live in urban and metropolitan areas and the expectation is that that number will grow to 70% in the coming decennia. At global level, a process of realignment and functional spatial concentration can be seen that has been initiated by international and continental logistical systems on the one hand and local and global investment and labour potential of metropolitan areas on the other hand. (Image 1). It is an irreversible process that shows itself everywhere no matter the differences in the triangle of physical, social and economic pre-limiting conditions.

Arranging that physical world is a complex assignment, maybe even the most complex one. A precarious balance between that what society thinks to be of importance in social-cultural and economical sense and the way in which that must reflect in urban structures, the public domain and the architecture of objects and elements in behalf of activities, functions and living functions, must be found through means of all kinds of management processes. A precarious balance between public and private needs related to that what is available and possible within the current topography.

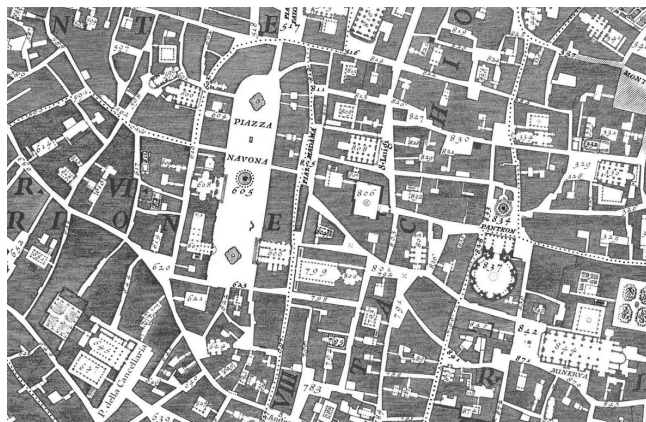
The modern city wants to derive its meaning mainly from its urban identity. It seems to be the ultimate means to generate attractiveness with which a flow of human capital can be developed and bound to the urban context that in its turn can further invent and continue itself as a result. Cities -through city branding - are entangled in a mutual fight to be rated on the ladder of intrinsic, independent and authentic urban vitality. (Image 1.2.)



img.1.1: Global (harbor) cities by night



img.1.2: City brandind indicators



img.4: Giovanni Battista Nolli, La Grande Pianta di Roma (1748)



img.3-4: Albert Cuyyp Market Amsterdam 1950-1999
 img.5-6: Rembrandplein –square- Amsterdam 1950-2009



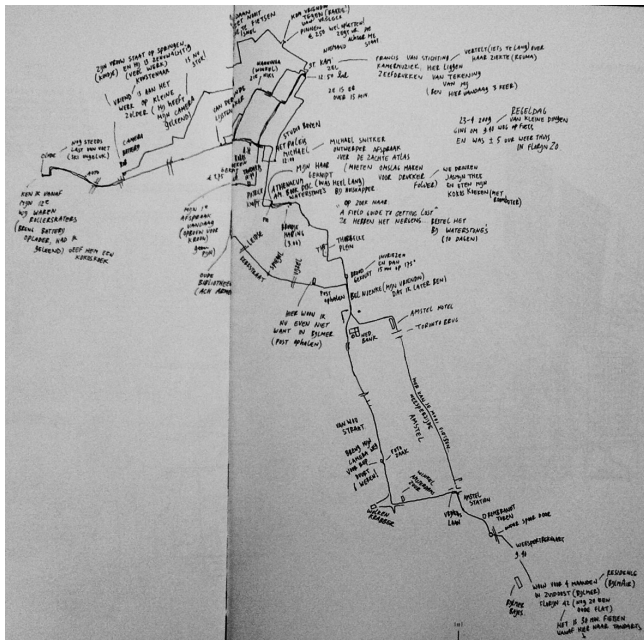
img.6.1: Actual spatial concentration of market places located on the internal city ring dated from the late 19th century

New wine in old casks

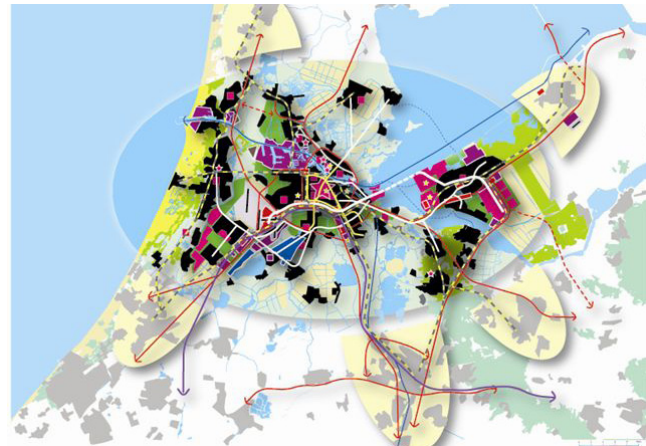
That what we want from the city and city life essentially has not changed. The observation of Giovanni Battista Nolli, 'La Grande Planta di Roma (1748) in which he draws the topography of the City of Rome into a map (Image 2), is still representative for that what we need of a city. His city map shows, next to the complete public spatial network frame of streets, alleys, squares and parks, the complete public spatial areas that together make visible the available domain for collective use: a vital combination of urban and architectural interior. Of us that may not sound very new, but in those times it was a find that stated the difference between public and private owned areas that however were both used collectively. In itself it is worth reflecting on the fact that this difference between public and private collective structures still form the basis of urban quality in all

its different variants, typology and vitality.

Despite advancing times, the enormous development of cities and the fact that we as inhabitants of those cities have changing demands, the use of the public private domain in essence did not change very much. Important areas and destinations – anchor points- in the city such as important programmes, squares, parks and markets have adapted in detail to the changing spirit of times (Image 3 to 6.1). Their position however in the city map, as an anchor point and their social-economic meaning, has not been affected but even more so been enforced. Despite the differences in lifestyle people gather at those places choosing a terrace or place that is in coherence with their own lifestyle, be it a grand café or an English pub.



img.7: Cognitive map, personal TomTom, movement in circuits for everyday business



img.8: New Map of the North district of Amsterdam

img.9: AMA, planning concept Amsterdam Metropolitan Area

The urban network frame of streets also functions as the most important public spatial system. Not only for transportation, despite the metro etc, but as a generic source of information for understanding the city plan and everything that has been placed into that plan as destination and urban programme. It adds up to a total source of information we need in our daily use of the city as a cognitive map, our personal internal TomTom (Image 7). Such an urban frame also forms the basis for high flexibility, the ability to take in other than the present functions and programmes. For example, the Amsterdam ring of canals can, given its original role and set up on the basis of current insights, be considered as an urban distribution area. Given the importance of creating value for estate property at this moment the area shows a very strong adaptive capacity and thereby functions as a bearer of urban vitality and quality. The inheritance of the

20th century city

Our cities are being rebuilt, they are under construction both physical-spatially and social-economically. Especially in the Dutch

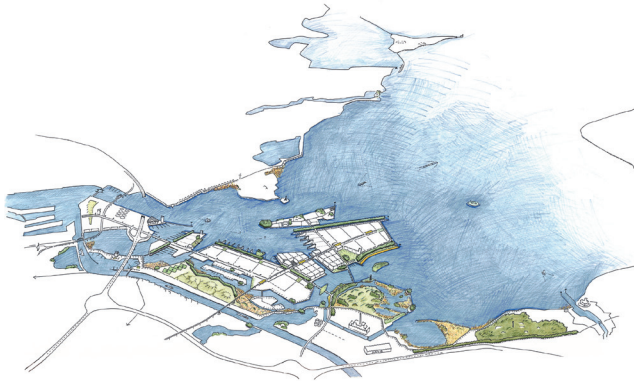
delta 'Randstad' no city goes without metropolitan transformation projects on different scale levels of its area and beyond (Image 8 to 11). We are faced with them on a daily basis. Dutch society is also being rebuilt and is undergoing a radical change in its social-economic regulatory system. A transition process that has started in the eighties of last century and of which the end is still not in sight. We went from a centrally led collectivistic society with a high feeling of brotherhood – a caring society – to a very individualistic one. Especially the role and position of the central government as regards to the different operators in the market has changed drastically. The sequential phases of political demarcation and the spatial assignment of sequential governments show a large ambivalence with regards to who is responsible for the overall control. Under the guise of 'one can only do one thing at the time' recent governments out of pure necessity and party out of their own interest and exposure preferably look towards developments within Europe. Unfortunately, lower governments are not facilitated in such a way that they are able to overcome the arisen vacuum on policy and execution.



img.10: Bird's eye view of the new urban district IJburg



img.11: , Zuid-As, -South Axis- Amsterdam



img.10.1: Bird's eye view of the new urban district IJburg

However, local politics have been able to profile themselves very strongly in that vacuum and not always in favour of their assignment and the quality of the city. Municipally councillors cannot allow themselves to let their policy be influenced by the day-to-day illusion of their electorate. That also shows the lack of control from the political midway, namely of the provinces and/or of regional politics. It is not for nothing that almost none of the polities intended by the national government have actually been executed in the last decennia. Society benefits from structural thinking instead of economic thinking. The latter is too much subject to short-term actions and individual sentiment.

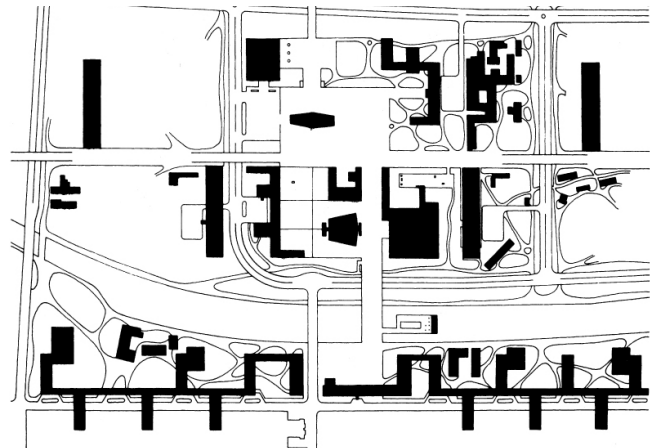
Expansion in the 20th century

Parallel to this global process of deregulation many cities have developed and exploded enormously in the last 60 years. The area of cities has multiplied in a very short time (Image 12, 13 and 13.1-2). In The Netherlands, the landscape as a result of building in relatively low densities has been brought in a condition of urban dispersal. In addition, the application of the CIAM principles of dividing functions has done no good to the city and has brought it on the verge of going bankrupt. It has brought about a general surplus on public domain in new urban areas as a result. (Image 14). They are areas whose functioning - as a result of lack of context and extensive use - is strongly under discussion while at the same time it puts pressure on the municipal finances to maintain it all.

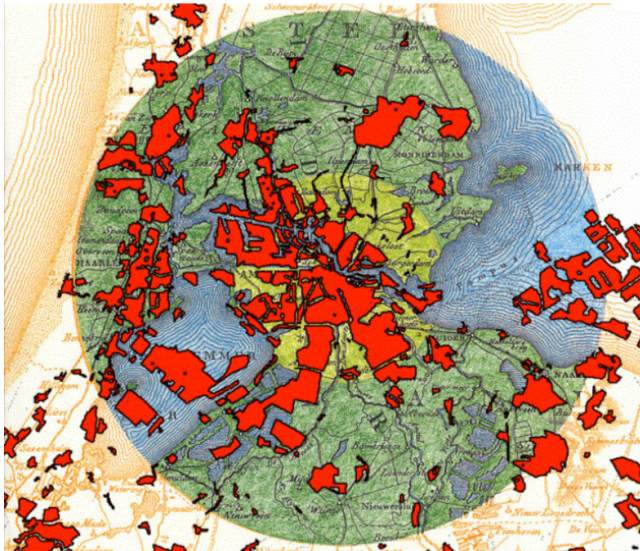
The result of a fast and unrestrained growth is a society that in all facets and scale levels is fragmented both social-economically and physical-spatially. The consequences are very well visible and tangible. They are a logical consequence of a long-lasting process of expansion without moments of consolidation to test that fast development to content qualities. The world manifests itself like a labyrinth. It is not for nothing that there is an enormous demand for re-defining, re-finding and re-binding of physical-spatial networks social-economic flows and interactive logistical chains to be able to come to related vital and sustainable processes.



img.12: Topography region of Amsterdam 1800



img.14: Comparison of the historical City of Parma and a CIAM footprint of Sant-Die



img.13: Projection of urbanized region of Amsterdam 2010 on top of topography of 1800

Structural fragmentation

One of the prominent problems is that rural and urban areas are diluted by the large scale infrastructure. Traffic structures of cities are being optimized from traffic logistics point of view. They are no settlements for work and facilities and offer no support for recognition, orientation and accessibility (Image 15 and 16). That what was divided does not get re-connected and area-bound identities and meanings are lost by lack of attention. Urban areas lost their relationship with their surrounding landscape as a result of the positioning of infrastructure at their borders. Inhabitants lost sight on that relationship and do not know the ways that can connect them to that surrounding landscape.

In our research after the relationships of one of the older Dutch New Towns, the City of Zoetermeer with its surrounding landscape - including the potential metropolitan park 'De Groenblauwe Singer' of the river 'De Rotte' at the eastside of the city - that division between city and landscape becomes apparent. It also becomes clear how badly the internal and external structures of the city connect. With that the city loses the possibilities to make these relationships into a varied identity of the public domain and with that of vital important for its consumers and investors (Image 17 and 18). The research took place on the basis of one of our new R&D analysis methods, the 1-2-3-order. With this method a large amount of situation in our cities - including urban anchor points and rural relationships of cities - have been researched with surprising results.



img.15: Infrastructure of Almere New Town



img.16: City axis Beijing

The analysis of the City of Zoetermeer

The analysis on the basis of the 1-2-3-order shows two of the four 'faces' of Zoetermeer in which the external spatial connection of the city and the internal accessibility from the urban border is visible. The border has been defined with a red line. The analysis of the east side of the city shows how poor to almost nil the accessibility to the city is, how immensely large the relationship with the metropolitan park area of the 'Groenblauwe Slinger' could be and how large the spatial connection in the urban area of the City of Rotterdam is (Image 17).

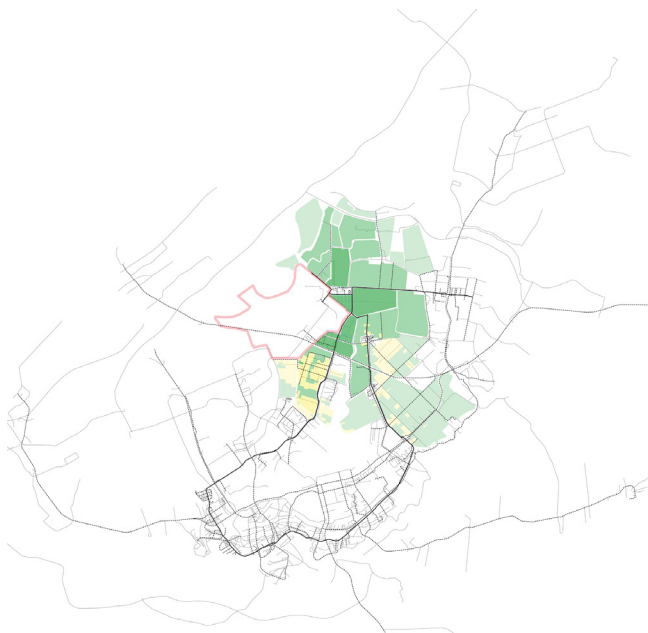
The second illustration shows the interconnection of the west border. It shows an unprecedented strong relationship from the City of Den Haag to the City of Scheveningen (Image 18). At the same time it becomes clear that the spatial bearer thereof also regulates the inner urban accessibility in Zoetermeer. It is one of the few historic lines that are present in the city plan. It is also visible that the external spatial correlation with Den Haag is stronger than the internal within Zoetermeer itself. With that the analysis endorses that Zoetermeer has been developed from a city concept that is context unrelated, in which a strong division of the different kinds of traffic was the starting point. The City of Den Haag offers inhabitants a fine-mazed network of public-spatial connections to reach local and

urban destinations, something that the City of Zoetermeer has more trouble with. If we place the east and west map over each other we can make a statement on the way in which there is a coherent spatial continuity within the urban frame of Zoetermeer (Image 19 and 20). Unfortunately, there is ample continuity with all consequences for the social and economic activities and investments in the city. At the same time, previously mentioned possibilities to make identities on the basis of different relationships are not possible.

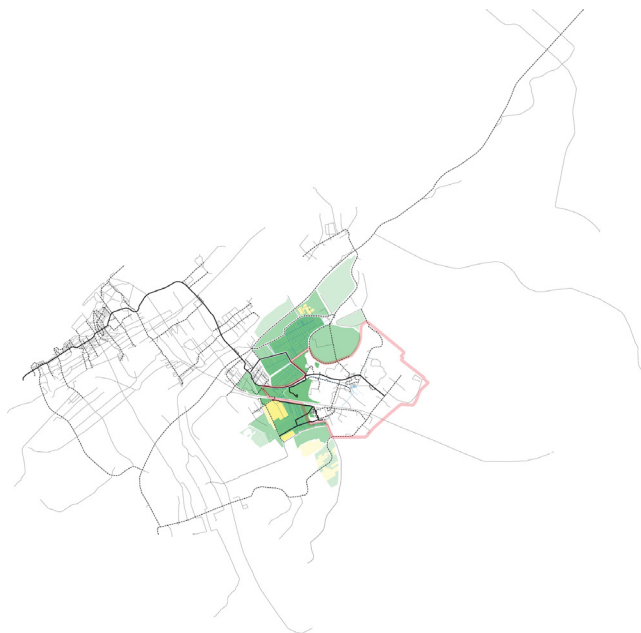
The connectivity mask show the spatial correlation and accessibility from all view points (north, east, south and west) and the infrastructural systems of the city. (A20, NS and Randstadrail), placed onto an underground of all available anchor points in the region. It shows an image of what areas can be optimally serviced through those infrastructural systems and can develop and/or keep their vital social-economic position as a result (Image 21).

The parallel and serial city

When the interconnection and the accessibility of anchor points - such as squares - in old and new cities are compared with each other the anchor points in new cities turn out to be very poor. The reason for this difference in spatial correlation can be found in the

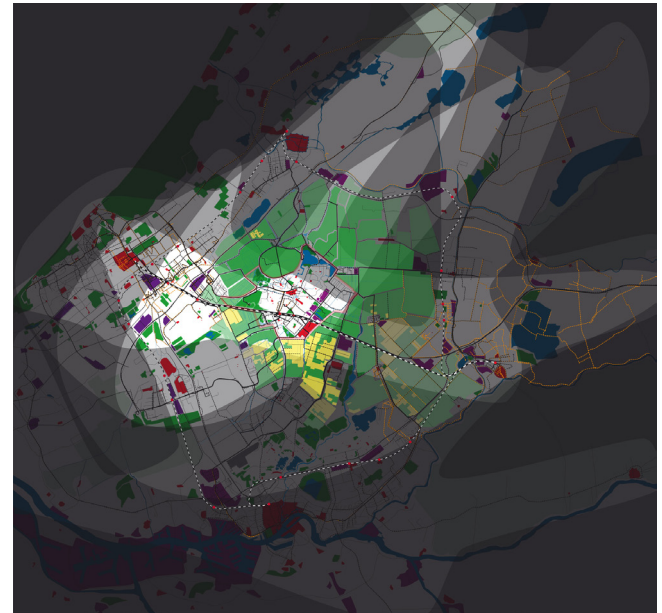


img.17: Analysis of the east side of Zoetermeer

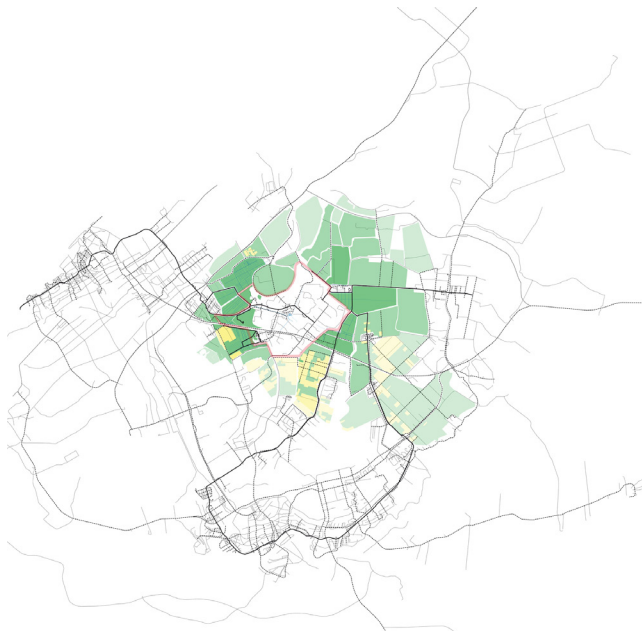


img.18: Analysis of the west side of Zoetermeer

fact that old cities have developed themselves from one or more quarters and neighbourhoods on the basis of long existing connecting lines that managed the relationship between those different parts and the bigger context. This in contradiction to new cities such as Zoetermeer and Almere that have developed van the outside in on the basis of a total city concept. They have been modelled and designed in smaller parts and areas of the city according to rules and characteristics of the chosen model. As a result, especially because of the hermetic building regulations in that sort of areas, all adaptability to develop something different has been ruled out unless - out of ongoing obtained insight - the original plan is left and the paradigm is being changed. Unfortunately, that seldom happens. Next to that in almost every modern new town the green-blue and the grey network have been strictly divided by separate living areas what resulted in serial composition of spatial barriers and functional division. The frame of old cities offers consumers the possibility to connect two or more destinations in different ways: it has a parallel system that is adaptable. This is in contrast with the serial, linear frame system of new cities where there is usually only one possibility of connecting two different destinations (Image 23 and 24). Serial systems therefore only offer one type of utilization,



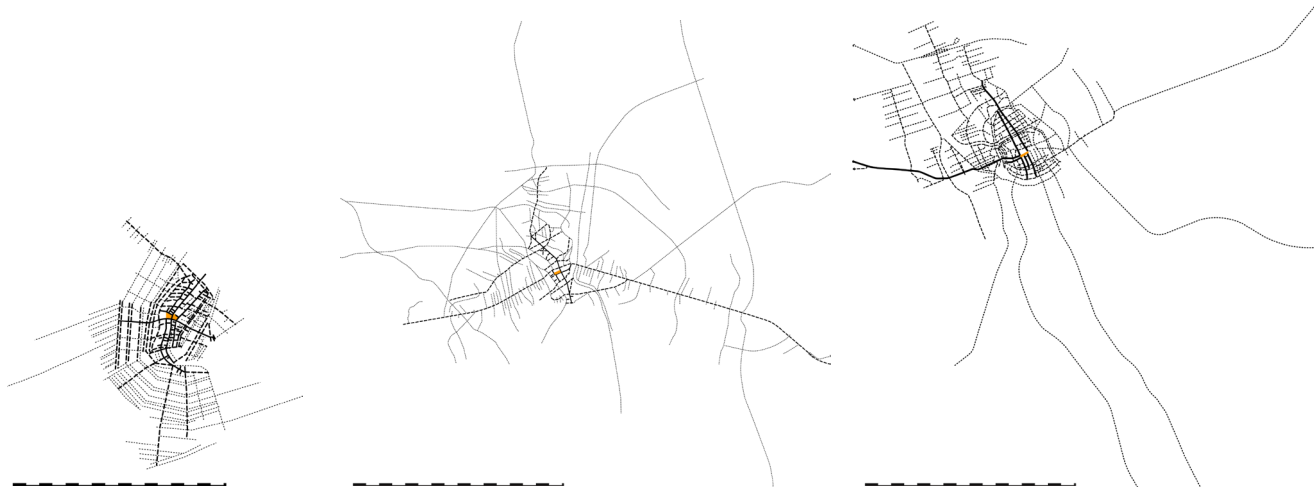
img.21: Total connectivity mask of Zoetermeer including anchor points in the region



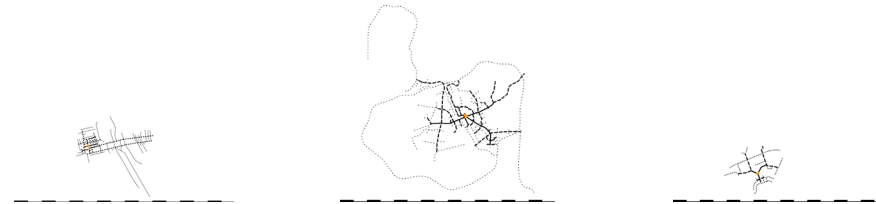
img.19: Analysis of east and west face of Zoetermeer



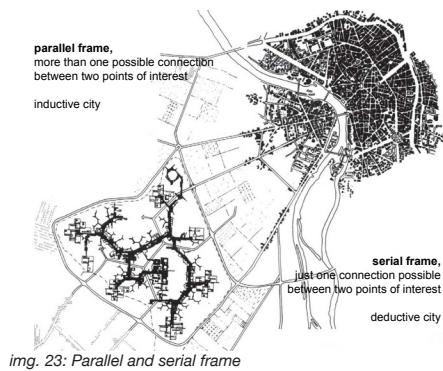
img.20: East and west face, with a revision of east/west dominant lines



img. 22.1: Spatial correlation of squares in the old Cities of Amsterdam, Amersfoort and Groningen (regard the scale notation)



img. 22.2: Spatial correlation of squares in new cities – Almere, Houten and Zoetermeer



img. 23: Parallel and serial frame



img. 24: Parallel and serial frame, Space Syntax analysis, Amsterdam and Almere

which is bad for the user possibilities. It is also limiting the interest of private investors and because of that, contra-productive for the vitality of the city. The identification with the public domain does not come about and consumers do not enter into a sustainable relationship. As a result they will not feel responsible for the area as well.

Urban hierarchy

For that identification with anchor points a minimum of two parties are necessary that for a longer or shorter period will need to have a 'fit' with each other. Both have their own identity, the consumer from his or her age, phase of life, personal characteristics, lifestyle, hobby's and preferences, the object, the place or the area with its position and characteristics in programme, appearance and uniqueness. The 'fit' can be seen as a consumer contract with which the experience of the city is a mutual merit. An important requirement is that the consumer needs to be able to reach his destination, that the object can easily be integrated into his cognitive map and that the object relates well to other – local of global – anchor points. Or: the consumer has integrated the anchor point logically into his own circuits.

With a serial frame that urban hierarchy does not or barely comes about at the expense of the so necessary identity of those areas



img. 23: Sum of the individual circuits, based on GPS-research in the parallel frame of Amsterdam

and with that the possibilities to develop activities and programmes for many consumers. Life in the city demands parallel worlds that function both simultaneously and in overlap with each other. Unfortunately we humans can only think serially and we organize our world on that thinking pattern doing the same with our new cities. A parallel urban frame is conditional for making individual circuits. It helps people to set out their own time-space-agenda within the frame of the city and it determines the efficiency thereof. Urban hierarchy is a result of the sum of the individual circuits and it comes about by the concurrence of utilization and coinciding of circuits of all people and with that determines the possibility for private investments and return on investment (Image 25).

The cognitive city

For a city to function well it is of importance that consumers can make a mental map that covers the city as a whole. This map is being processed in the hippocampus into a cognitive map that supports us for orientation like an internal TomTom in daily life and traffic. That map is a result of our personal use of the city and therefore directly proportional to the way in which the urban frame facilitates us and gives us access to all possible anchor points. A bad urban frame causes fragmented and incomplete cognitive maps with consumers. The more we move without using a TomTom, and orientate ourselves well within cities, the better our cognitive map will be, grow and expand, as well as our hippocampus. Taxi drivers in London and Paris turn out to have a larger hippocampus than other consumers within the city. Their map has a stratification at different scale levels that can be compared to those that are used by urban designers and planners for analyses and city design. Eventually, the result should be a 'readable' and accessible city.

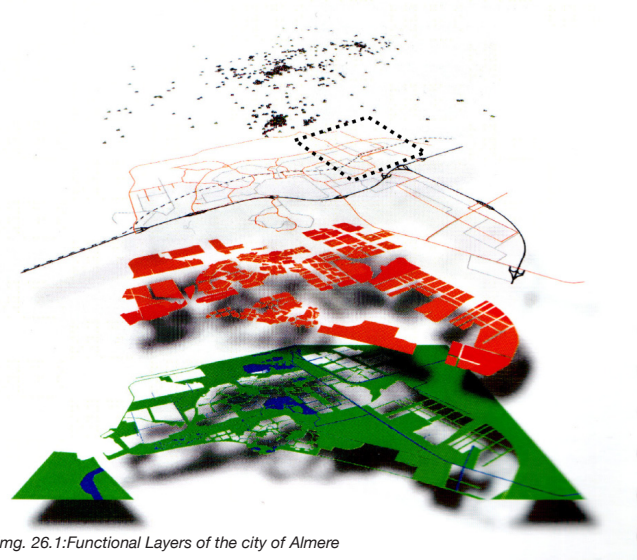
Sprawling, dividing and connecting

The enormous growth of cities has made them very complex, difficult to understand and 'read', and, as mentioned before, both spatial and social-economically fragmented. Not only by the increase in possibilities or the scale of the urban system but by the adjoined increase of social and economic rules of engagement. Many large cities – as a result of our need to keep grip on that urban complexity – have been divided into boroughs. All the while these boroughs are standing with their backs to each other and are in danger of losing their mutual coherence.

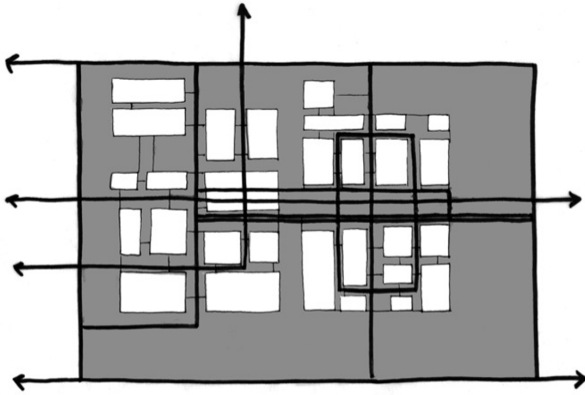
New city areas and vinex areas have been provided with a high level of design but are empty and mono-functional at the same time. Employment possibilities, other than for white-collars have mostly been withdrawn from the city areas and into the surround-



img. 26: 'de Evenaar' -urban axis- in Almere-Buiten



img. 26.1: Functional Layers of the city of Almere



img. 27: Gated community Almere-Buiten



img. 28: Actual spatial relation, dysfunctional inter connection

ing landscape without any binding to that landscape or a logical, causal qualitative coherence. The city becomes empty and becoming more monotone, less interesting and less liveable. The reality is a collection of half solutions. The latter seems to have been the planning paradigm of our New Towns such as the City of Almere and Zoetermeer.

Because even though the City of Almere, given its context, is one of the most interesting places within The Netherlands, again follows an

example of this city. The area Almere-Buiten exists of a large amount of separate neighbourhoods that, as a result of traffic divisions, bus lanes, greenery and water areas have been divided from each other. In that same area 'de Evenaar' is situated as a central axis coming from the urban centre in the direction of the 'Oostvaardersplassen', waiting for attention, a programme, liveliness, consummation and identity. In potential it is a fantastic connection from the city to one of the most interesting nature areas of The Netherlands. The axis,



img. 29: Missing 'links' and the new connections related to the 'links'

as it is now, is not interesting enough however, for public-private investments as nobody is able to visit the area as it has not been connected to the surrounding neighbourhoods that house 30,000 to 40,000 inhabitants (Image 26). All other anchor points of Almere-Buiten such as the centre and the parks are faced with the same problem.

Gated community

The transfers from this area to other parts of the city go around the city as much as possible, and that keeps consumers unnecessarily out of the scale level of their neighbourhood, area of city area and burdens the upscale network that was in fact meant for other use. As a result the use of the public domain on local level has been watered down where a densification has taken place on routes that do not profit from it. The routes from the neighbourhoods, the sub-local infrastructure to the upper-local connections of the city have the character of freeways. Also, the physical design of these freeways makes it impossible to have functions or facilities next to them. As a result no multiple utilization of the ground is possible within the local scale area and no investments are made on that basis in functions and facilities on other routes either. In fact, one could speak of a collection of 'gated communities' that, as a result of the fact that



they are brand new, do not stand out (Image 27 and 28).

The City of Almere is a sportive city where many children enjoy sports. Unfortunately, mum and dad they have to transport them by car to their sport facilities. The most extensive biking area of The Netherlands is not considered to be safe for use because of its isolated location and the long distances. A modest estimate on the basis of the amount of sports activities within the city assumes that every week a minimum of 800,000 kilometres are driven by car to support these activities. That is about 80,000 litres of gasoline which amounts to € 128,000. How much fine dust particles and CO₂ would that be?

Connecting, missing links

By connecting several streets in the network by means of missing links a transformation of the serial system to a more parallel system can easily be realized. De Evenaar would become the centre point of the city area and with that realize its potential as central axis, with programme - squares and facilities including employment – and the relationship with the nature area 'Oostvaardersplassen'. The connections internally would have fewer barriers which would enable the 'slow' traffic – including the traffic to sports facilities and other accommodations - to increase (Image 29 and 30).



img. 30.1: New spatial correlation, total connection



img. 30.2: Areal photo of Almere Buiten and city axis the Evenaar

The assignment for the 21st century: urban vitality

As stated before provinces, regions and cities lack a functional efficiency that generates a usable spatial hierarchy. That is an absolute condition in daily life of all consumers of the city, to have an optimal social-economic development, to have spatial coherence and social encounters. Given the many articles, political discussions, policy documents and programmes there is an enormous need for that coherent spatial structure, a need for regional coherence, spatial context and urban vitality.

In light of the presented societal changes this demand for connection, looking of, finding of and making of relationships will draw the attention of designers and planners that think and conceptualize integrally. In managing this the assignment has changed as well: not being over the assignment but being part of it in forming a vision, product, method and execution. The assignment for the coming decennia must be characterized by a functional and spatial defragmentation and facilitating of the social-economic synergy.

The deprived neighbourhood as a vital indicator

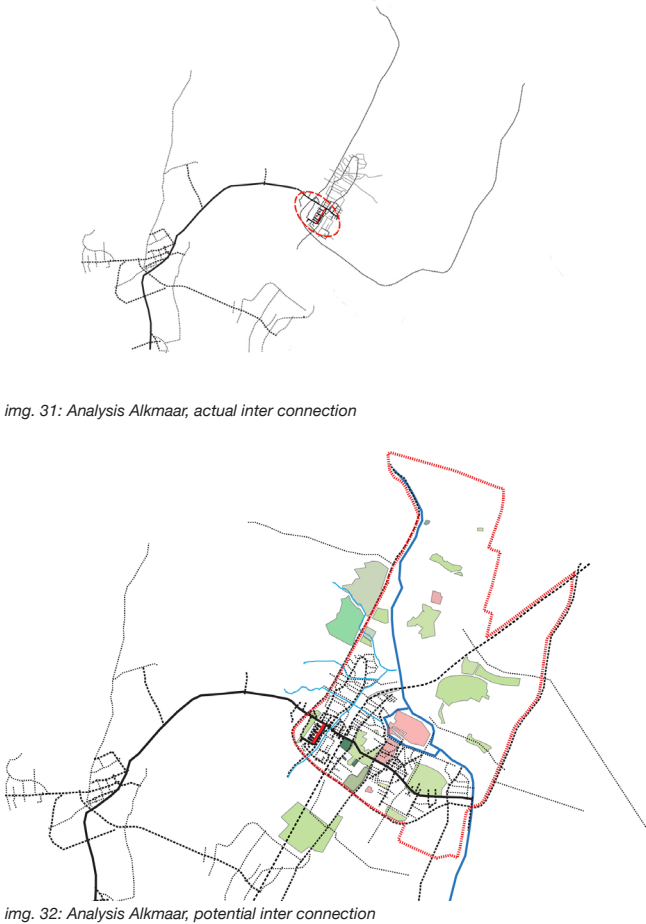
In the issues of deprived neighbourhoods many of those factors come together, and they address the aspect of urban vitality as no other. How can a city profile itself as a vital society when there are neighbourhoods where people do not want to live as they are no good? Neighbourhoods where the social cohesion is far to be found and the neighbourhood in many aspects does not live up to a minimum of requirements as far as living and facilities are concerned? The question whether or not many cities have in fact gone bankrupt

then seems justified as the phenomenon of deprived neighbourhoods can only exist because of a lack of collective financial means to actually solve those problems. They are the literal result of insolvency.

From our research programme it becomes clear that in many of those neighbourhoods the urban frame, the internal spatial quality falls short and the external spatial coherence with the rest of the city and the landscape is lacking. They often are areas that, because of their location or because of the presence of strong barriers, can be considered as (inner) urban periphery zones, kind of border areas with dead-end streets. Next to that these neighbourhoods do not have destinations at their disposal, anchor points that are not only a concentration of necessary programmes for daily needs, but also could add surplus value to the area by their identity.

On the basis of our 1-2-3 order-analysis method we researched the area 'De Hoef' in the City of Alkmaar. This analysis brings the typical conditions of a problem area clearly into perspective. The area is literally built-in between the outer by-pass and the railroad, cut through by several waterways. These barriers clearly isolated the city as a whole, the outer area of Alkmaar has a better interconnection than the most important anchor points of the city itself, such as shopping, park, employment and centre areas. Next to this, the area falls apart in isolated parts as a result of its inner barriers. One of the residential streets, the 'Cornelis Pronkstraat', shows that very clearly in the analysis drawings (Image 31 and 32).

The drawings show the analysis of the existing and possible future



img. 31: Analysis Alkmaar, actual inter connection

img. 32: Analysis Alkmaar, potential inter connection

Structural characteristics: Type of transformation / intervention:

FRAME	PATTERN	CIRCUIT	everything is fixated, no real transformation whatsoever (1)
frame	PATTERN	CIRCUIT	"optimalisation", reprofiling & capacity boosting (2)
FRAME	pattern	CIRCUIT	relocation of programme elements, functions (3)
FRAME	PATTERN	circuit	rerouting / diversion of people & traffic movement, flows (4)
frame	pattern	CIRCUIT	"Urban Acupuncture" (5)
frame	PATTERN	circuit	superposition of new structure and routing, "Hausmann" (6)
FRAME	pattern	circuit	redevelopment, f.e. of problematic Post-War quarters (7)
frame	pattern	circuit	all things variable, demolition, eradication, "tabula rasa" (8)

BOLD CAPITALISED = fixated, unquestionable, invariable, leading regular = flexible, questionable, variable, following

img. 33: Schematics relation FPC

situation. If the local authorities would, together with involved investors, invest in a new railroad level crossing the neighbourhood ‘De Hoef’ would get a direct relationship with the urban facilities and the easterly city areas, and these easterly city areas with the easterly dune landscape, and the coastal area of the North Sea. This transformation would improve the reachability and accessibility and with that increase social and economic investments. The vitality of the concerned areas and neighbourhoods would increase because the available park and shopping areas would play an more important role. Eventually, it would lead to increase in value and improve the social structure.

Flows & places

Cities deal with movement, ‘flows’ (transfers), and ‘places’ (places that matter). They are about infrastructure and destinations, streets and anchor points. They are about the context in which we reside and the question why we reside there. Even though moving and transferring, as a result of our leisure culture has become a purpose in itself, reaching destinations for the majority is still the final goal. Movements that we set out in circuits (routes) are a means with the purpose of residing somewhere for a longer or shorter period. The circuit is the physical reality that both combines and integrates our personal economical needs and social relationships. The urban frame offers, through collective concurrence and density on circuits and places a basis for social-economic investments. Despite the need of public governments to share the responsibility for the public domain with private investors, the responsibility largely lies with those governments. The public domain, being a collective investment, functions as the hardware of a city. The destinations and circuits - mostly from private investments – on the other hand, function as the software so to say.

Vital city, FPC city, public city

In the FPC-model as developed Karen Buurmans MSc a causal correlation is being made between these three aspects. The model, on the basis of analysis, offers the possibility to identify the essence of the issues at hand while at the same time it makes clear where the solution can be found. Of course it is easier said than done, but here the FPC-model really functions as a model and offers a frame work for the many analyses and design instruments that we and many other professionals make use of (Image 33).

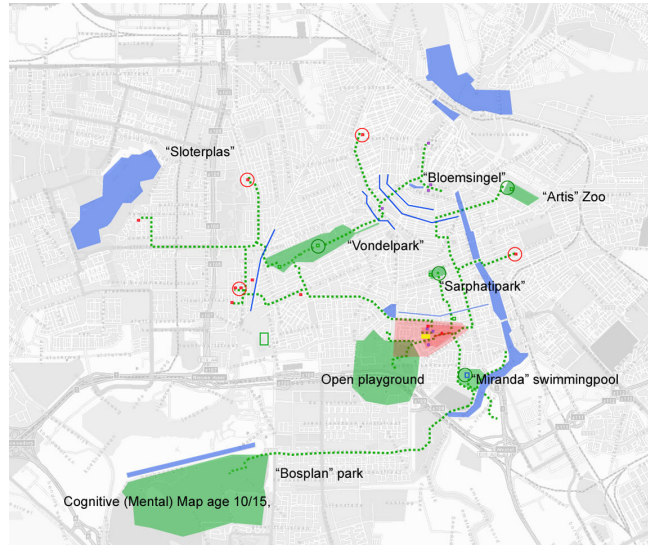
We use the research schematics in our R&D projects as a method and we have applied and tested it in several urban areas and on the basis thereof compared the outcome (Image 34). A good comparison of R&D results can only be possible when for example with one

case or location several different instrumental methods are applied, or when different cases or locations are researched with one instrumental method.

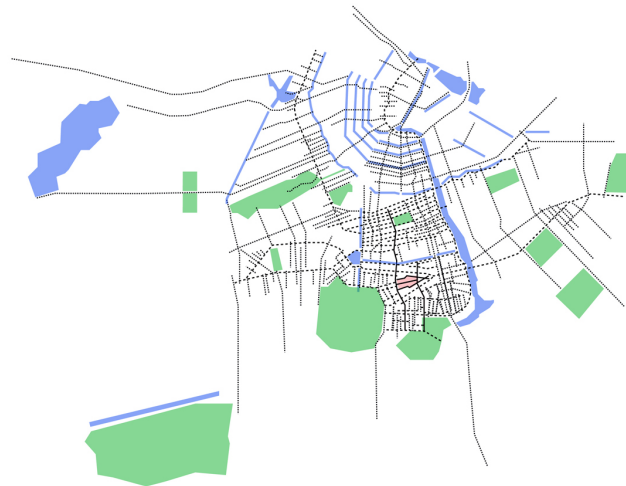
The essence of a vital city comes down to the fit between the system of moving and residing, between the physical system that, by its connection, functions as a good urban frame, and the economic system that, by its liveliness, functions as a good urban frame of anchor points and patterns. With that it offers the possibility for identification of areas, linked to individual and collective circuits, and it offers a framework for social cohesion and urban quality. The fit between the frame and the anchor points of the city feed the spatial memory of the consumer and the qualitative content of the cognitive map. That map is a personal TomTom that gives us the information to anticipate on that what we want to do in that urban space.

The cognitive frame, the analysis

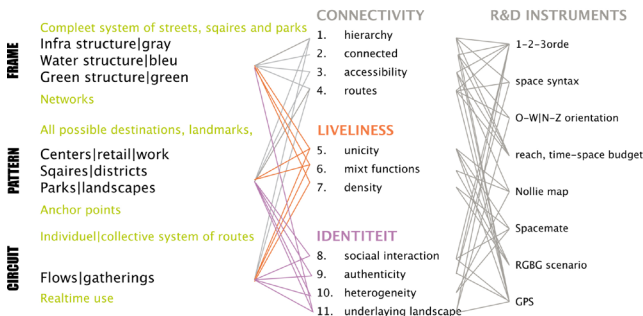
The better the frame of the city manages to make discovery and utilization of the city possible, the better the chance that that will actually be done by everybody. As turned out from the analysis of a residential address in the Berlage area of Amsterdam-Zuid of a 12-year-old boy there is a direct connection between the quality of the frame and the spread and position of personally chosen destinations (Image 35 to 37). Eventually, that leads to a better and larger cognitive map with the consumers as we stated before with the taxi drivers of Paris and London. Therefore, it is not necessary to research many different situations to be able to draw conclusions on the quality of the urban frame. One can suffice with a limited amount of relevant discernable addresses at different places within the city. That suffices to make that anticipation and consumer quality of the frame visible.



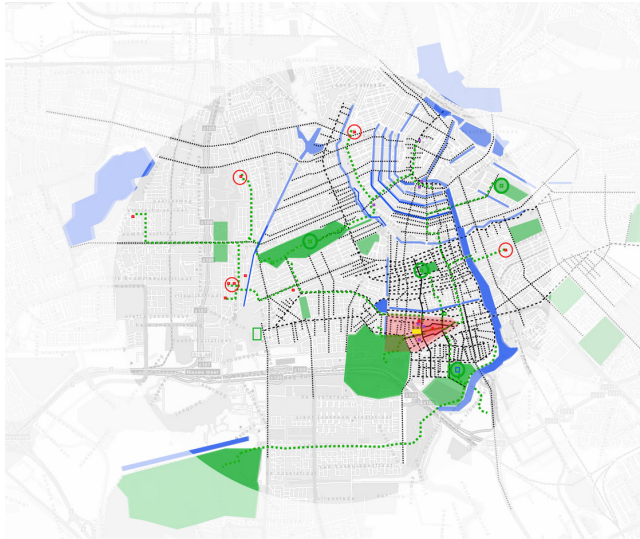
img. 35: Cognitive map Amsterdam of a 12-year-old inhabitant



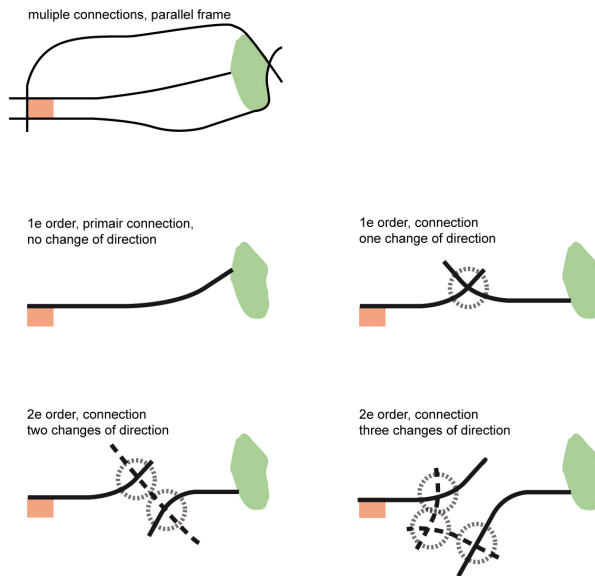
img. 36: Interconnected frame starting from the residential address



img. 34: Schematics research theme, analysis and R&D instruments



img. 37: Correlation between the frame and cruising range of the destinations



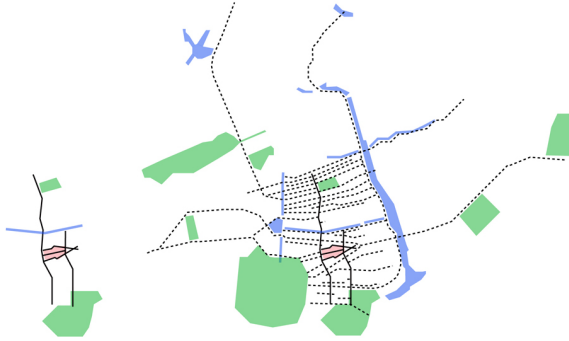
img. 38-42: Parallel frame and inter connection of the frame in three steps

The 1-2-3-order frame analysis we developed is also based on insights of cognitive psychology. One can wonder: Why three and not four or five steps? That can be understood when we realise how we help someone that asks for directions. We usually explain that in three steps as follows: go straight ahead; take the second exit at the left hand side and then the third street on the right. This explanation makes clear that no decision need to be taken as long as going straight ahead is possible. But when the explanation gets too complicated because too many changes – e.g. more than three - need to be pointed out we conclude with the remark: 'Please ask again when you arrive there'. Our spatial memory registers these changes in direction as steps and decisions that we have to take and places them into our cognitive map.

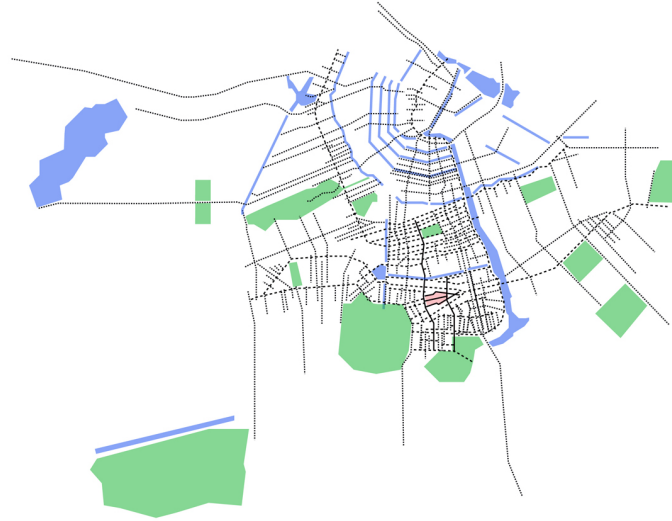
A good inter connection means that there are many user possibilities within those three steps from an address, place or anchor point. That has to do with, as mentioned before, the Amsterdam parallel urban frame in which there are more connections between two or more points from the destination. At the same time we can see that the network of Amsterdam is a fine-mazed system of streets that is very favourable for daily use and making circuits in the city. Because of that diverse destinations and anchor points have a place in those personal, small and large circuits of consumers.

Places in the city become important when they can be reached from a large amount of addresses in the frame within one or two steps and they derive their investment potential and their role as anchor point from that. When between squares, parks, centres and other anchor points of the city a first or second order inter connection exists and it concerns a parallel frame that makes it possible to reach those places in many ways, it will altogether be very vital. An inter connection with three or more changes of direction guarantees no condition for a good social-economic investment (Image 38 to 42).

In the 1-2-3-order analysis of the address of that 12-year-old body it becomes clear how the inter connection system makes the physical conditions visible. In the first step starting from the residence the Sarphatipark and the Martin Luther Kingpark are joined and is it possible to explain their position on the city map and the way towards them, whereas in the second step the central station and the Vondelpark - amongst others - are joined and easy to find. The third step connects the residence with the old city and offers possibilities to understand the historical stratification of the city (Image 43 to 45). But more important is the understanding that all other residential addresses, economic and cultural destinations on these lines of the public domain – including the squares and parks – are available and accessible for use and identification within three steps as well. In this way, a large social-economic user potential, as a result



img. 43: 1st order of a residence
img. 44: 2nd order of a residence



img. 45: 1st, 2nd and 3rd order of a residence

of concentration and concurrence of people comes into being on that parallel network of Amsterdam.

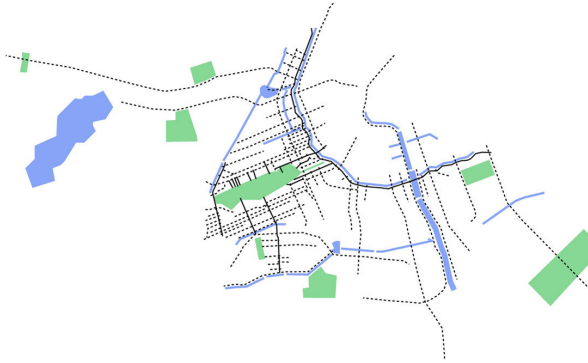
In the same way we can also research its separate destinations. Using this we can understand how the interaction between those different addresses can lead to a whole of insights on a larger scale of the city. It would lead too far to go into detail but the illustration of that interaction makes some other very important phenomena clear. (Image 46 to 47). Firstly, the special role of the Vondelpark in this area of the city is made clear. It sits like a spider in a web and is not only a connector of the personal anchor points of the young boy but is also the binding centre and orientation point in the city map. (Image 48). The park for many is a direct accessible residing area for shorter or longer periods of time and at the same time functions as a stepping-stone and city route to the centre. Is it not for nothing a very popular park, a residing area for the young and old.

Both a bad incomplete cognitive map and a bad adhesive and impassable urban frame will hinder the consumer in executing his or her social-economic programme and activities within the city. It will be a direct threat for the urban vitality of that city or of separate areas.

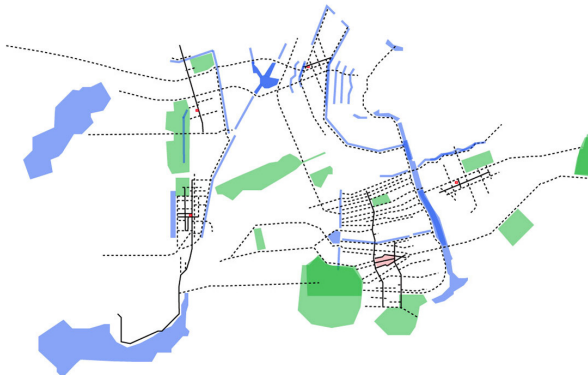
Dispersal, variation and uniqueness

Of course the vitality of the urban system is dependent on the quality of the anchor points but the mutual coherence and dispersal of it is maybe the most essential condition for generating that vitality. If the distance, the time-space factor between the anchor points is too large, the connections in the circuits are not or amply made, not withstanding the quality of that frame and the connected anchor points. The closeness – measured in time – of the anchor points is of essential meaning. It is not for nothing that the living density and the multiple intensive spatial utilization is a factor of importance, both as cause and effect.

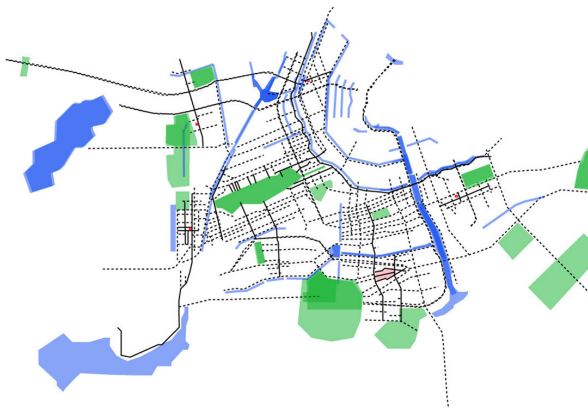
Cities have a big problem if they function badly or do not have enough anchor points both in quantity and in kind. If on top of that the distances between the anchor points in the daily time-space reach of consumers cannot be overcome, the city will fragment social-economically and the vitality will be in danger. Anchor point can be relatively small and simple. They can be of local level or rise far above that level. But they stay insignificant in the context of metropolitan systems and areas such as our Belgian-Dutch metropolitan clustering. But nevertheless that insignificance they are the



img. 46: 1st and 2nd order of the destinations



img. 47: 1st and 2nd order of the Vondelpark



img. 48: Destinations including the Vondelpark

heart, the energetic engine of the urban liveliness and identity and a frame work for human action and their social-economic activities. The programmatic interaction, the spatial coherence and dynamics between all the different anchor points is the basis of city life and all its human, material and energetic flows.

The way in which inhabitants and consumers of a city are enabled to manage themselves mentally and physically is proportional to the survival of that city. Every failed area, every badly functioning anchor point, every destitute population group is nail in the city's coffin. A vital city is a city that is being understood and optimally used by its inhabitants and consumers.

In conclusion

The method of analysis according to the FPC-model and the way in which it is connected to the instrumentation is a strong trump in the hands of professionals and students that do not only want to make a design that scores from a design and branding point of view but who are primarily interested in understanding the motive that has to be at the basis of the design as a starting point for giving meaning. Not the design is the biggest problem now-a-days – there are enough very good designers – but the motive is of the most importance. Only if the motive is right a vital fit can evolve from that what we can do with a design through modelling and materialization and the meaning of that design in a given context. Only then is a design an integral product with vital meaning and not just a picture.

The proof of the pudding is in the eating

As final part of this article I do not want to deny the reader the essence of what it is all about: whether or not the methodology and the R&D instrumentation work properly. Whether our foresight and the developed instrumentation can contribute to urban vitality both from the analysis as knowledge generator and from the designs that can bring a possible vital future into view for all consumers of the city.

The Copenhagen- Ørestad-case

I gladly want finish this article with the Ørestad-project of April 2010. In that month 60 students from five European countries have worked intensively under the leadership of twelve research professors on location for fourteen days. In the first week six themes have been researched on the basis of the FPC model that have been translated through a SWOT analysis into planned strategies and designs in the second week. Given the fact that it is a very current urban project of which only parts have been realized it has become one of our most special projects. Now, after ten years there are enormous doubts already about the spatial quality of the public domain and the vitality as a whole. (Image 49 and 50).

In the meantime, other areas have been developed that have better branding than this project. That rises enormous doubts about the further realization of the Ørestad project. The area consists of the island 'Amager' south of the central City of Copenhagen on which the city in the past built some of its fortifications for defence on both side of the water of the river Øresund. Amager lies, on area and neighbourhood level, despite quick connections in the direction of Copenhagen-City, Malmö and the airport, completely isolated.

(Image 51). The dominant infrastructure of the metro has caused several parallel running divisions – including water and roads – that enforce the linear image and at the same time does not allow connection with the context of the landscape and the existing right-angled living areas of the island. (Image 52 and 53). The area until now has been a province for the city in facilitating of infrastructures and functions that could not be placed elsewhere in the city.

The area has been researched on inter connection and urban scale, liveliness and urban dynamics, and on identity and consumer patterns using the FPC model, more or less in line with the previously stated instrumental schematics.

The area has, both from the landscape and from the present programme, several important existing and potentially to be developed anchor points. The island Amager in the northern part has the old town, the concert hall and several educational institutions (Image 54 and 55). ; in the east the coastline with beaches; in the west the historic harbours with walking avenues, new architecture and leisure accommodations such as a swimming pool; in the south-west part the centrally located park and even more southerly the former military terrain with special ecological value; in the south lies the airport and finally, all around it water functioning as a frame work. Some of these areas such as the airport and the concert hall are already anchor points of urban level. The isolated location and the way in which they are positioned within the public domain makes it virtually impossible to realize any functional coherence and residing quality in the area. This goes at the expense of the development potency of the complete area and the programmes of existing and possible to be developed anchor points.



img. 49: position of Ørestad



img. 50: Arial picture starting point of execution and metro line



img. 51: Historic Amager



img. 52: Metro line



img. 53: Concert hall with inner axis



img. 54: Old Harbour southern city area 'Amager'



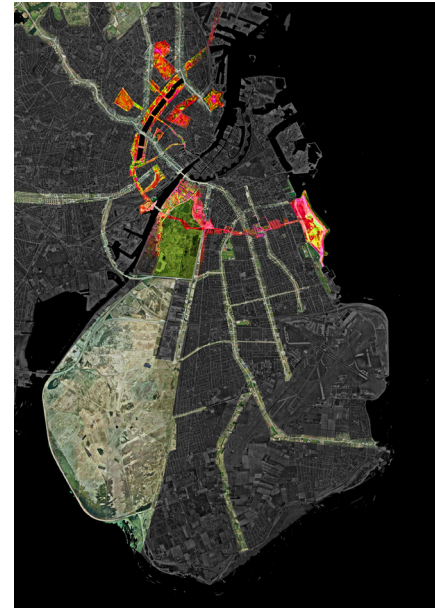
img. 55: Residential building next to metro line



img. 56: The actual situation



img. 57: Phase 1 and result of phase 1



The expertise, the plan and the strategy

It is necessary to translate these obtained insights into a context wherein inhabitants and consumers can find their way effectively, can make a mental picture of where they are and how they can move about for their personal and mutual activities. A new well-fitted cognitive map.

In the actual situation one can talk of a fragile frame, the north-south axes are dominant and the east-west axes are short. The urban landscape because of that is fragmented.

Phase 1) The first step to heal the frame happens through placing a few of the missing links into the frame, including a bridge. The

amount of anchor points on that east-west line can be enforced on the basis of this starting point. The result of this intervention will be the start of the Copenhagen Slow Ring (CSR) that functions as a counterpart and addition for the dominant north-south axis through the city. The CSR connects and adheres the city centre, the harbour, the new Amager City Park, the areas around and the Amager beach. The traffic sign literally portrays the fact that the Slow Ring makes a direct connection from the city with the park and the beach by going straight on. Despite the distance it will decrease the psychological threshold and give the system vitality (Image 56 and 57).



img. 58: Phase 2 and result of phase 2

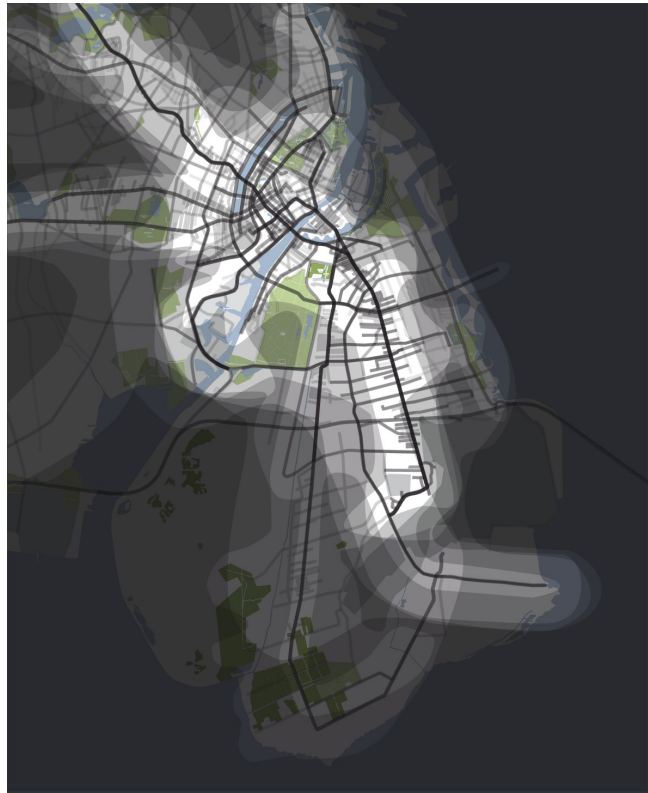
Phase 2) The second step concerns the healing of a large amount of other east-west connection within the frame. In that process it will be inevitable at times that a new corridor must be made through an existing living area and sometimes it will be necessary to give an exiting road a more modest role in the frame and decrease the traffic pressure and speed. The end result will be an urban frame that contributes to the emergence of new urban anchor points. This new frame will offer Amager the conditions to become a vital part of the city as a whole (Image 58).



img. 59: Signpost

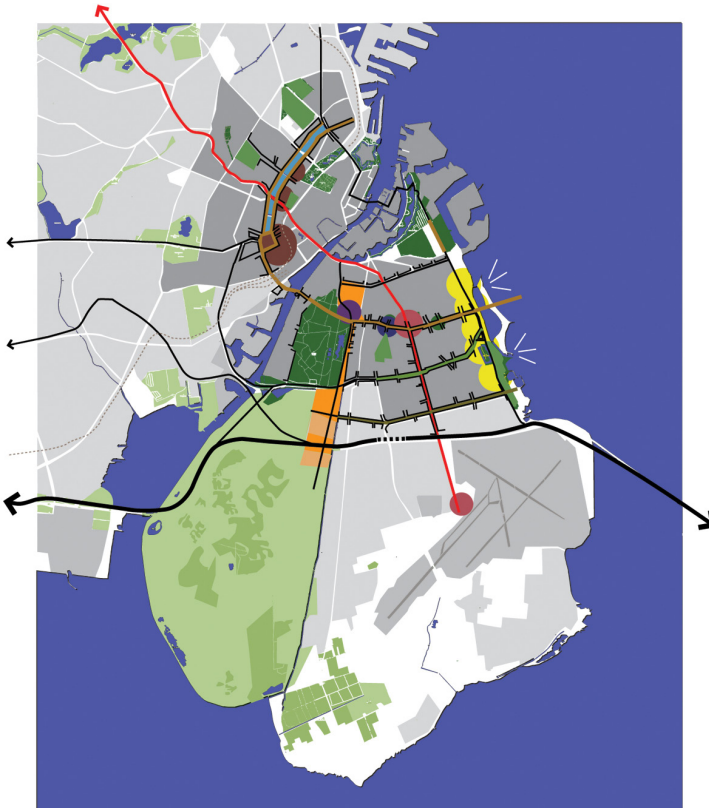


img. 60-61: Connectivity masks, before and after transformation

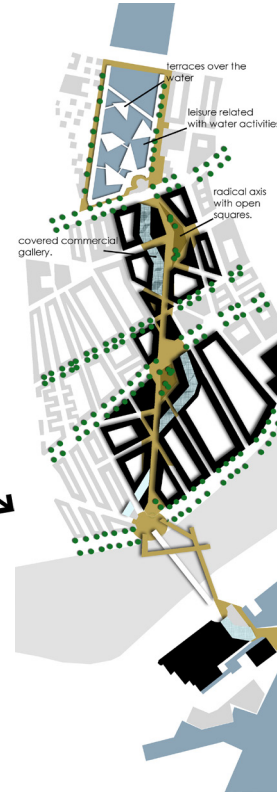


Both connectivity masks, in which the differences of the inter connection are visible, show an improvement that will lead to a substantial enforcement of the use of the anchor points (Image 59, 60 and 61). The master plan again shows the whole of ideas and interventions for the coming years. Especially important therein is the connection of the Slow Ring - through the bridge over the harbour - with the historic water zone in the westerly part of the city to get a special quality as anchor point (Image 62 and 63).

As stated before: the better the inter connection and the accessibility of a place or an area, the better it can become a part of our cognitive map. Therefore it can become an important destination and with that give an impulse to its economic vitality. Urban vitality derives thanks to an effective synergy between physical conditions followed by social-economic interaction of the consumers themselves. People are drawn to people, and programmes draw new programmes.



img. 62: Master plan, visualisation of developments of Amager and the Slow Ring



img. 63: Detail connection

On the author

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