

Welcome To The Generator

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Research Plan

Introduction

Metropolitan mega cities such as London are a complex and intense network of systems and structures of domestic, cultural, political and economic life, that together are responsible for what might be the very appeal of such mega cities. In this research, we view the heterogeneous city as being void of too much activity, yet, constantly subject to temporary intensities caused by 'crowd machines': Planned or spontaneous events; spectacles or actors that have the potential to (temporarily) affect or 'activate' parts of the city.

Together these crowd machines then form a system of crowd machines that each discharge crowds (and their effects) onto the city. Each in their own location, and in their own rhythm: pulses of temporary intensities. Before and after the 'discharge', these crowd machines are in a way 'switched off', yet still take up important and strategic spots in the urban fabric.

Problem Statement

The mega city is the domain of a large number of crowd machines. Each giving off pulses of temporary intensities that affect the city in the unique rhythms of the individual machines. One could see this as different flows of intensities that fill or sweep through the city, until they are assimilated by other city structures: transport systems, 'sinkholes' or 'sponges' that have the potential to process these intensities and 'restore' the flow of the city that exists when a crowd machine is 'switched off'.

In this sense, the crowd machines that are in large responsible for the appeal of the mega city are strangely mostly very much introverted objects. Closed within its process, and no longer engaging with its effects (temporary intensities) after it has done its purpose. After this moment, its effects have to be solved or processed by other systems and their rhythms within the city.

In other words, the rhythm of crowd machines always must encounter and adapt to the 'rhythm of the city', or, maybe it is the other way round? It is this moment of adaptation that forms the main scope of this research and possibly the potential of new design interventions.

Research Questions

How do temporary intensities affect the heterogeneous city of London?

In order to analyse, let alone answer such an interpretable question, a number of sub questions must be taken into account first.

Which actors in the city (crowd machines) are responsible for creating temporary intensities? And how can they be categorized?

Where can these crowd machines be found within the city of London?

Then, what are the cycles or rhythms that crowd machines (that discharge crowds onto the city) are part of?

What are the specific effects and dependencies of these crowd machines?

- / spatial/social/infrastructural
- / impact/intensity
- / argument on positive/negative effect

This research leads to the following question, which may or may not be both redefined or answered adequately by a design:

How could architectural interventions anticipate these effects?

In this case meaning: how can ones design become a crowd generator or a constantly 'slumbering' crowd machine?

Theoretical Framework

The theoretical framework of this research is twofold. It has been established presently that temporary intensities in London are analysed through the lens of 'crowds' that are left behind by crowd machines. The way these crowds are perceived in this research is the result of a series of writings on crowds and their characteristics, predominantly taken from and inspired by Canetti's book *Crowds and Power*. Canetti's work is by itself so extensive and widely used that especially in context with architecture, this theory is constantly present. Canetti's theory is used to define the different types of crowds, and therefore crowd machines, as well as their specifics. For my personal glossary and conceptualisation of temporary intensities, his writing on crowds lays at the basis. The second part of the theoretical framework handles from the idea of systems and networks: how these crowd machines together form a certain system or create a type of flow in the city that is responsible for 'activation' of certain areas through the means of temporary intensities. John Law's *Writing on Actor Network Theory*, but also Alexander's *'A City is not a Tree'* form the foundation of the conceptualisation and linking throughout the different scales (spatial/time wise/etc) in this research.

The shift or gradual process of going from only research towards research and design is also to a large extent the product of the literature on different scales as mentioned above, coming together. However, the importance of reference projects and precedents should not be overlooked within this framework. For these precedents one should at this early stage in the design process think about mega structures or megaform interventions (Friedman, Archizoom/Dogma, Niemeyer, Maymont, Price etc.), that seem to focus more about the concept behind the radicalism of such interventions than in some ways the execution. Kiendl's 'informal architectures' (a collection of projects, and different experts commenting on their own and other's projects) falls in this same category and was more of an inspirational read, when the process started shifting slowly towards design.

Methodological positioning

After having established that viewing the concept of a heterogeneous London through intensities or even 'chaos' seemed my biggest initial fascination, quickly, the problem of terminology came into the picture. The research into temporary intensities should first define its boundaries and conditions. This is not merely a description of a personal interpretation of terms used, but should also justify why these conditions are relevant, meaning a theoretical basis needs to be established.

The 'word' chaos immediately proved to be inadequate and problematic, as the word is so open for interpretation that without defining on what scale or medium one perceives chaos, literally everything falls under the scope of this research. Therefore, the mapping of actors and connected structures had to be constantly defined by a growing set of literature sources that each for some period of time inspired the approach and perspective of the research, but also constantly sparking the need for new literature that could justify looking into the subjects through different scales. Literature review is therefore more a constantly growing and moving foundation in this research, where theories and writing was used to find an own logic and language to research temporary intensities for the case of London.

However, simultaneously the process of mapping actors and systems (later called crowd machines, sinkholes and sponges) that are responsible for temporary intensities was taking place. The individual programs of these different crowd machines was further placed into the context by adding the element of 'time' to the process. This part of the research could probably best be described as 'digital fieldwork' (contacting and finding people and information online). Hereby the specific rhythms or cycles became spatially visible. Placing these combinations of location and cycle in the context of the other actors shows how the city is 'activated' throughout the day. This is visualized as standalone but also combined maps, as well as diagrams and graphs that aim to show the discharges through time. Gifs or videos combining both these sets of information are used to show the 'activation' of the city through crowd machines throughout the day.

The program or typology of these actors is researched in context of their 'sinkholes', giving insight in the dependencies and to some extent, limits that belong to them specifically. Naturally becoming of importance in the design process.

Each time the process of literature review and mapping grew closer together or to some kind of conclusion, either of the two needed to be broadened to cater for untouched topics. Reference projects or precedents (both very conceptual as practical) usually formed the initiator. Especially later on in the research, the focus on precedents increased in the process of trying to find ways to formulate and shape the findings into design strategies or forms.

Argument on relevance

The abundance of actors that can result in the discharge of crowds within the mega city of London maybe lies at the very core of the appeal of said mega cities. Their presence being responsible for its economic, social, cultural and touristic importance. The increase in tourism, as well as the growing urbanisation (in the situation of London or) within cities here is directly related to the persisting and increasing effects of these actors.

Analysing temporary intensities in the heterogeneous city of London through the lens of crowds shows when and how the city is affected by crowd machines. Their intensity, duration and dependencies become visible, resulting in a set of cycles or rhythms that are specific for the relation between the city and its different types of crowd machines.

The research hereby uncovers how temporary intensities affect the city as a whole, according to the different rhythms of crowd machines. Therefore, the research also shows how and when these machines are 'switched off', and with that, the amount of time these actors are introvert and closed entities within the city. The linking of different types of crowd machines shows a conglomeration per 'time period' of the year - day that would not become apparent when these different types of actors are mapped or just considered as separate entities. The whole set of different crowd machines together is just as much a list of 'black boxes' as of discharge moments. With this, the notion of these actors having a potential to generate a slumbering effect instead of a pulsing/ discharging effect (feeling more as crowd generators than crowd machines), then forms a new foundation and starting point for further design interventions.

References

Alexander, C. (2017). *A City is Not a Tree*. Adfo Books.

Alexander's writing was part of the process of viewing the involved actors in combination with Actor Network Theory. The book argues that when analysing (architectural or urbanistic) developments or systems, one tends to think about this process in the form of a tree: where one intervention or operation is the start of a growing tree of consequences, while in real life, this should be seen more as a network or linked system to begin with. This book was therefore of relevance in the process of establishing the dependencies and linkage of the actors as a whole.

Canetti, E., & Stewart, C. (1984). *Crowds and Power*. Farrar, Straus and Giroux.

Canetti's monumental writing on everything that could possibly involve the word 'crowd' was essential in defining crowd 'types' and learning from their characteristics, as well as their historic background. After realising that crowds would fungate as a lens to trace temporary intensities in the city, Canetti's *Crowds and Power* formed the foundation in establishing my own personal glossary.

Fogelson, R. M. (1993). *The Fragmented Metropolis*. Amsterdam University Press.

Briefly consulted and linked to the somewhat abandoned idea of parts of the city becoming (temporary) fragments once they are affected by discharged crowds. The concept of this piece of writing however remains valid background information within this research.

Jallon, B., Napolitano, U., Boutte, F., & Boutté, F. (2017). *Paris Haussmann*. Adfo Books.

Jallon's extensive analysis of Hausmann's (urbanistic) interventions in the city of Paris. Through different scales the blocks and all their dependencies are examined and extensively ordered. A mind blowing undertaking which formed the first fascination in the process of finding research methods. The extreme ordering and dissecting of the blocks and their surroundings fitted right in with the initial ideas of approaching the city by the means of strictly ordering 'chaos'.

Kiendl, A. F. & Walter Phillips Gallery. (2008). *Informal Architectures*. Black Dog Pub.

In this book, the author and various architects, writers and artists shed their light on aspects of their own or others work, regarding to the concept of 'informal architectures'. Several passages and projects proved to be inspirational in the weeks after P1 as a means to focus on searching for locations and trying to find ways to implement the research results more into a physical object. Inspiring sketches and opinions on how the knowledge on crowds should be substantiated in our times and the case of London as it is right now.

Law, J. (1992). Notes on the theory of the actor-network: Ordering, strategy, and heterogeneity. *Systems Practice*, 5(4), 379–393. <https://doi.org/10.1007/bf01059830>

Law offers a concise overview of Actor Network Theory through different fields of use. Thinking about the city and its actors together as a endlessly interwoven network and hereby problematizing the dependencies and possibilities to extremes both complicated and simplified terms as ‘chaos’ or intensities. The way parts of this writing on ANT is implemented in this research can be found in the chapter of ‘Crowd Machines’ in this research paper.

Logan, C., & Gosseye, J. (2019). Architecture and the Spectre of the Crowd. *Architectural Theory Review*, 23(2), 171–177. <https://doi.org/10.1080/13264826.2019.1675228>

This article is a short review on different sources of writing about crowds and architecture. An useful source that connected and somewhat expands upon some of the other sources that were also revised in this research. This writing largely relies on Canetti’s theory and finds other cases that together validate the writers’ conclusion that crowd situations should and can be supported through design and planning.

Smithson, P., & Smithson, P. (2001). *The Charged Void--architecture*. Amsterdam University Press.
& Smithson, A. (2005). *The Charged Void: Urbanism (First Edition)*. The Monacelli Press.

The first two books in the ‘The Charged Void’ series by Alison and Peter Smithson (architecture and urbanism) show a section of their rich catalogue of projects and designs. Their idea of the design location as a charged void could prove useful and insightful when designing places as ‘generators’.

Secondary Readings

Allen, S. (1997). From object to field. *Assemblage*, 41, 8. <https://doi.org/10.2307/3171268>

Allen, S. (2008). *Points and Lines* (1ste editie). Amsterdam University Press.

Frampton, K. (1999). *Megaform as Urban Landscape*. Amsterdam University Press.

Lynch, K. & Joint Center for Urban Studies. (1960). *The Image of the City*. Amsterdam University Press.

Price, C., & Obrist, H. U. (2003). *Re: CP*. Birkhäuser Basel.

Publishers, A. A. (2017). *A+t 48 Complex Buildings. Generators, Linkers, Mixers & Storytellers*. A+t Architecture Publishers.

Riesman, D. (1950). *The Lonely Crowd*. Yale University Press.

Turner, B. S. (2009). *The New Blackwell Companion to Social Theory*. Wiley.

Velikov, K. (2015). Tuning Up the City: Cedric Price's Detroit Think Grid. *Journal of Architectural Education*, 69(1), 40–52. <https://doi.org/10.1080/10464883.2015.987073>

Personal Glossary

Temporary intensities: it is in these moments when the representation of certain components of the city's heterogeneity is expressed more predominantly than others. Then, for a certain amount of time, (parts of) the city encounter an increased amount of activity.

Actors: functions, amenities, places, events or spectacles that play a part in this research as 'crowd machines':

Crowd machine: crowd machines are actors that can cause temporary intensities in the city.

Switched off (the crowd machine is...): The crowd machine is 'switched off' when it does not provide its specific 'act or product of fulfilment' for its users.

Switched on (the crowd machine is...): The crowd machine is 'switched on' when it provides a specific 'act or product of fulfilment' for its users. Relying on its own rhythm or cycle, working until it has provided its product, and then releasing its users as an instant whole or:

Residue: A crowd of people can be perceived as the residue of the crowd machine: the crowd is what a crowd machine leaves behind after it has done its act of providing in its product of 'fulfilment'.

Crowd: spatial but also non-tangible form or representation of an intensity. This research traces temporary intensities through the lens of human crowds, this does however not exclude other forms of crowds, for these are often intertwined, to some extent, with these human crowds. Needless to say, a crowd then does not necessarily consist of people.

For human crowds, a distinction is made according to the theory of Elias Canetti; resulting in an open or closed crowd. Both definitions are explained at length as part of the research in the final passages of the chapter 'The Crowd'

Slumbering: the concept of a constant level of activity around actors as part of their usage. Meaning that these actors that as crowd machines now affect their surroundings with pulses of intensities will generate a constant flow of activity in between its pulses.

Research Essay

The heterogeneous city of London

This course's concept of the city of London as a heterogeneous whole, raises the question of what the implied heterogeneity consists of – if not everything – and when parts together become heterogeneous. However, this complex network being heterogeneous, it does not automatically mean that its 'outcomes' are necessarily chaotic or uncontrollable. One could argue that the city has a certain balance. If this is indeed the case, we should consider that this balance effects and is effected by the different parts of the heterogeneous network. However, if we should approach this hypothetical existence of balance by the very idea of the existence of non-balance, uncontrollability, chaos or intensities, one might find the border between one heterogeneous part and another. Then, it is in these moments when the representation of certain components of the city's heterogeneity is expressed more predominantly than others. Here we encounter a moment of movement; of activation, a shift in the balance, or a cut in the heterogeneous whole.

This fascination and hypothesis form the departure point of this research. The city will be analysed on the basis of these dominant expressions; occasions which from this point in the text will be called 'temporary intensities'.

By doing this, the city itself can be seen, as mentioned in the introduction, as 'void of activity' until the moment that it isn't. This moment has great implications, both physical as social. This can be visualized to greater effect with the concept of Actor Network Theory. John Law describes this as follows: "Actor network theory is a disparate family of material-semiotic tools, sensibilities, and methods of analysis that treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located' and that "it assumes that nothing has reality or form outside the enactment of those relations." (Law, 2009, p.141)

Crowd Machines

Based on this notion, the idea of certain actors being responsible for creating temporary intensities becomes more productive. However, temporary intensities can subsequently be 'caused' by an infinite number of actors, depending on what layer or scale the term temporary intensities are perceived or defined. Within the frame of this research the term temporary intensities is analysed through the lens of actors that have the potential to generate temporary human intensities. Logically, but also in consultation with ANT, this approach also indirectly touches upon less tangible momentary intensities that occur in and around these moments, because of these moments.

Just like temporary intensities influence each other on different scales, there's a constant movement in the meaning of the theory used to substantialise them in this research. In other words, parts of existing theory (such as use of the concept of ANT) constantly inspire and depend on new ways of thinking and angles on the concepts that are analysed, to formulate a vocabulary able to conceptualize and apply theories throughout these different layers. Sparking new phrasings, and perspectives that cause the research to drift away from the theory that inspired these new views almost the moment they occur. Hereby creating the need to constantly define and sharpen a personal glossary of terms, and their meaning within the scope of the research.

From this point on, the actors responsible for generating temporary human intensities will be called 'crowd machines': Planned or spontaneous events, spectacles or actors that have the potential to (temporarily) affect or 'activate' parts of the city. *Crowd machines are then the architectural component whose human residue – the crowd – is a visible spatial representation of an instance of a temporary intensity.* The crowd machine produces a crowd. The crowd can then activate the city.

The Crowd

Especially within the context of architecture and this research, it is necessary to define the term 'crowd'. For, in this specific case, the term might be less (or maybe more?) open or straight forward than how one might use it in our everyday language.

A valuable piece of writing that provided insight in how to deal with the concept of 'crowds' in general can be found in Elias Canetti's famous 'Crowds and Power'. Canetti offers a vast theory of the origin, applicability and different forms of crowds that are encountered in society throughout different layers and times.

The basic principle behind all the different types of crowds that Canetti defines, lies in the notion that 'there is nothing that man fears more than the touch of the unknown' (Canetti, 1984, p.15). Canetti states that this aversion is so intense that we try to avoid contact wherever and however possible. The crowd however, is the only moment that man can become free of this fear of being touched. It is the only situation in which the fear changes into its opposite. It is within this moment, in which body is pressed to body, and man has surrendered himself to the crowd, that he ceases to fear its touch (Canetti, 1984) p.15 The crowd becomes the interruption or even suspension of our fear of being touched, hence the human desire of being part of the crowd.

According to Canetti, this crowd can then be either open or closed. The open crowd is the natural crowd, as soon as it occurs, its focus is on growth. There are no limits whatever to its growth, it is open everywhere and, in any direction and therefore may spring up anywhere. Yet, "it disintegrates as soon as it stops growing" (Canetti, 1984, p.16) The open and spontaneous crowd is therefore both a powerful and sensitive thing: especially within the many layers and among the many factors in a city such as London, the occurrence of an open crowd can be easily sabotaged or can simply not find ways to come to fruition.

The occurrence of the closed crowd contrastingly is much more catered for within the city. The closed crowd creates a space for itself, by creating or 'accepting' its limitation. 'The closed crowd renounces growth and puts the stress on permanence' (Canetti, 1984, p.17). This permanence is guaranteed by boundaries: walls, fences, lines, acceptance etc. and by it, also limited by it: "once the space is completely filled, no one else is allowed in". Canetti offers a quite poetical closing statement to his description of the closed crowd and its building, that proved to be somewhat revelatory in the direction of this research: 'the building is waiting for them; it exists for their sake and, so long as it is there, they will be able to meet in the same manner. The space is theirs, even during the ebb, and in its emptiness it reminds them of the flood.' (Canetti, 1984, p.17).

However concrete the definitions of the open and closed crowd are, they only exist in the moment of the discharge: "before this the crowd does not actually exist; it is the discharge which creates it. This is the moment when all who belong to the crowd get rid of their differences and feel equal" (Canetti, 1984, p.17).

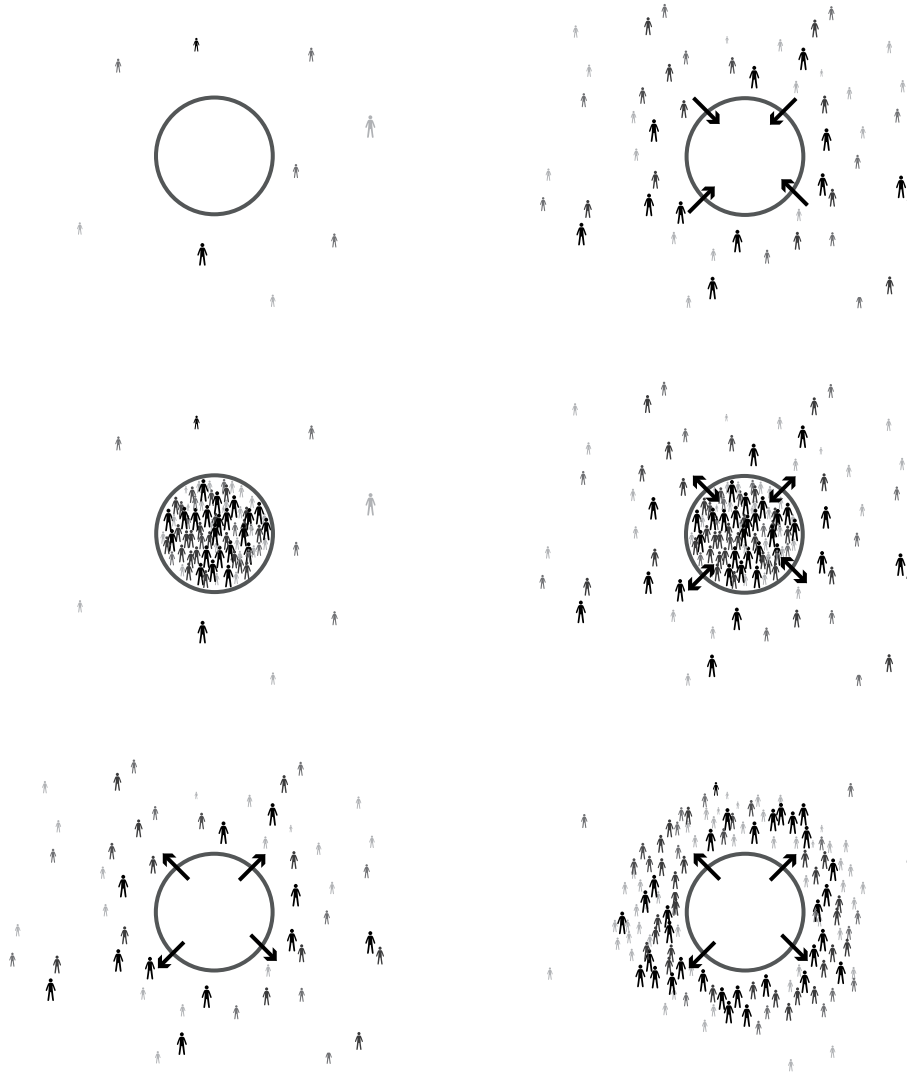


fig. 1: stages of the Crowd Machine (left to right, top to bottom): 1) situation when there's no activity in Crowd Machine, 2) gradual assembling, 3) dense crowd in the Crowd Machine, resulting in Canetti's closed crowd, no longer influencing the outside situation, 4) dense crowd in the Crowd Machine, with gradual assembling and dissolving, 5) gradual dissolving crowd, 6) the discharge moment, a dense crowd is discharged as a temporary intensity.

Topological mapping

The theory described up to this point forms the framework for mapping these ‘crowd machines’ in London. Hereby visualizing the gravitational fields and points for temporary intensities. The types of discharge as pictured above create a distinction in the different types of crowd machines and how they ‘release’ their crowds. As a whole, the types of actors that can be found, fall under a number of categories: sporting venues, music venues, theatres, clubs, festivity fields, marketplaces, 4AM clusterings, and areas with high intensities of nightlife/eating out activity. The Municipality of London has a large database of open-source data sets that were used to locate and map these actors in different categories. By comparing the locations of these different actors to each other (with software such as QGIS) in this research, one can discover clusters of different crowd machines throughout the city (fig. 2).

Crowd Machine Rhythms

The fact that the intensities that are analysed in this research are temporal, along with the different types of ‘discharge diagrams’ as illustrated in fig. 1 brings in the component of time, or rhythm of crowd machines. Through a process of what maybe be most fittingly called ‘digital fieldwork’ the discharge moments of the different types of machines were established, both in their daily (fig. 3) and yearly cycles (fig. 6). For the instance of theatres and music/event spaces the actors were first arranged in size (For example: live music venues were then put into three categories: capacities of 300/2500, 2500/7500, 7500/35000 and up). Then for each category, of a selection of example cases, the number of events per month was listed by reviewing their agenda’s of past events (see fig. 4 & 5 for a selection of example cases). This resulted in different data sets that contain the number of events of different actors, and different actor sizes per month and location over a period of preferably at least three consecutive years. To determine discharge moments for actors for which no concrete data was found, an estimate was made through combining Google Location History data – where Google uses aggregated and anonymized data from users who have opted in to Google Location History (Google, z.d.) and available data from comparable actors in other locations. For example, in the case of markets, no concrete data could be found. However, by comparing Google Location History live date, one could compare the daily flow in activity of different markets, to generate a basic figure that generally applies for markets in London on daily basis. By using Internet Archive Machines, one could then further compare these flows throughout the months of the year to get an understanding of the difference in activity on a yearly basis.

Putting these data sets together and comparing their specific ‘pulses’ has provided great insight in the seasonal, monthly, weekly and then mostly the hourly flow and cycles of temporary intensities within the city (fig. 6). Hereby, making visible the clusters and cores that are charged per their ‘rhythms’ and location. The resulting maps, diagrams and graphs are an interplay between gradual and instant increases and decreases of discharges on the time/crowd plane. For the convenience of presentation, the medium of a ‘gif’ is able to beautifully represent this combination of location and rhythm (fig 7).

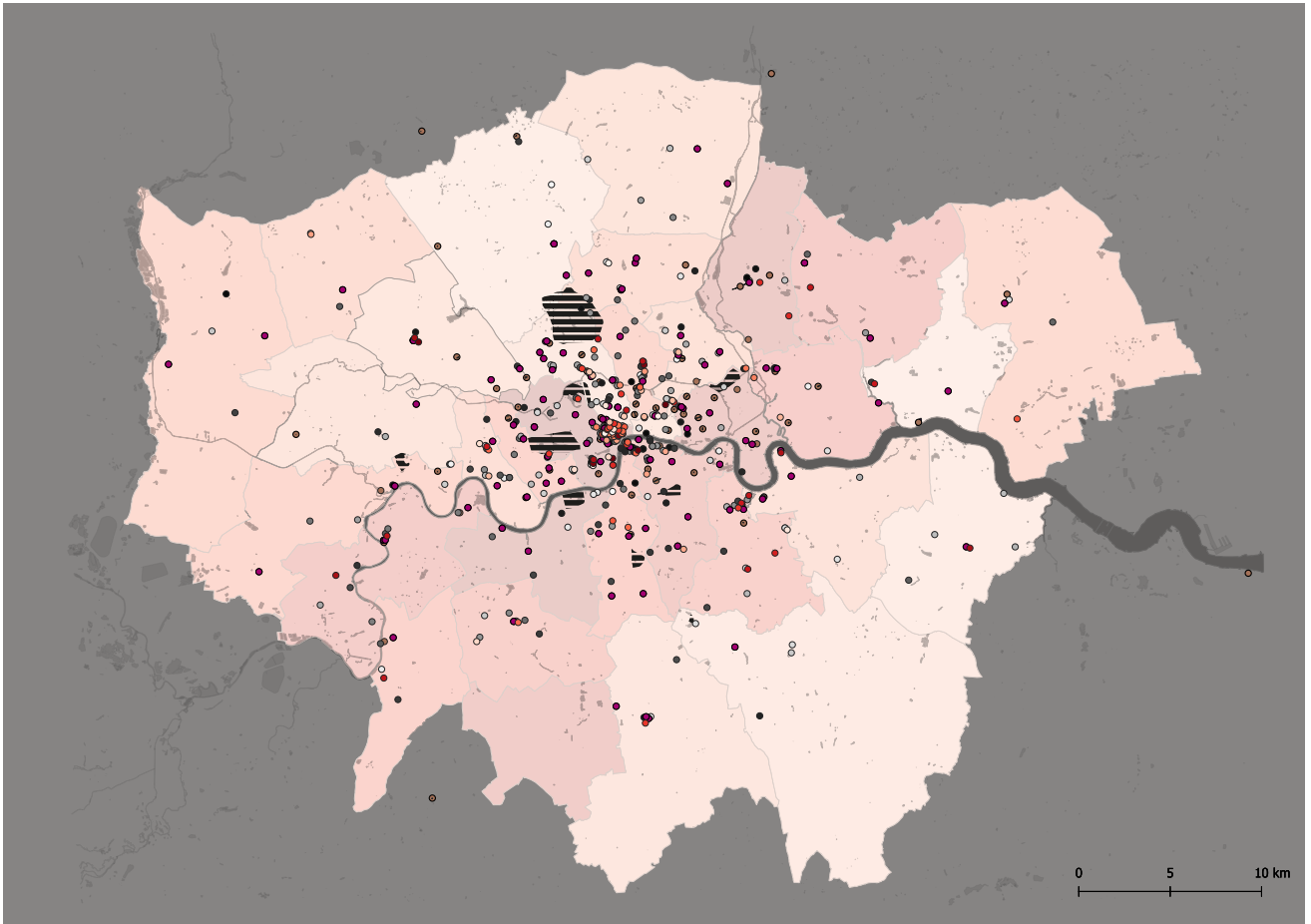


fig. 2: Combined map of analysed actors, resulting in clusters and patterns of different categories of actors on the scale of London as a whole.

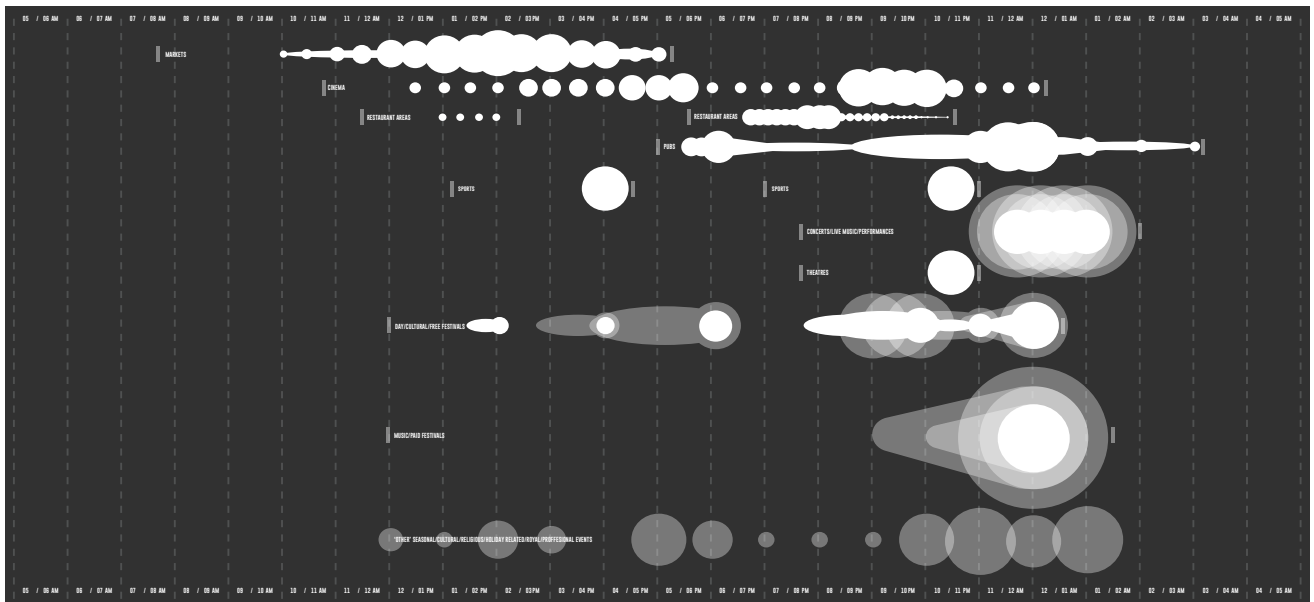


fig. 3: Visualisation of the discharges of crowds during the hours of the day, per analysed actor category.

	O2 arena	Capacity: 20.000							Average	Capacity	Average Total
	2020	2019	2018	2017	2016	2015	2014				
Jan	0	1	1	5	1	2	2		1,7142857	20000	34285,71429
Feb	1	2	3	8	12	0	6		4,5714286	20000	91428,57143
March	2	4	2	7	14	8	8		6,4285714	20000	128571,4286
April	7	4	7	3	3	3	7		4,8571429	20000	97142,85714
May	5	14	0	9		7	11		9,2	20000	184000
June	15	13	6	10		14	4		10,33	20000	206600
July	4	0	2	5			4		3,75	20000	75000
August	0	3	5	2					2,5	20000	50000
Sept	2	0	4	2	1	6	2		2,4285714	20000	48571,42857
Oct	5	7	11	4	7	4	4		6	20000	120000
Nov	10	6	5	6	4	2	6		5,5714286	20000	111428,5714
Dec	2	6	5	7	6	8	3		5,2857143	20000	105714,2857

	Royal Albert Hall	Capacity: 5500							Average	Capacity	Average Total
		2019	2018	2017	2016						
Jan											0
Feb											0
March		11	10	11	10				10,5	5500	57750
April		12	10	10	9				10,25	5500	56375
May		19	13	16	16				16	5500	88000
June		11	14	13	12				12,5	5500	68750
July		19	22	19	22				20,5	5500	112750
August		31	31	29	28				31	5500	170500
Sept		20	18	19	20				19	5500	104500
Oct		17	15	14	17				16	5500	88000
Nov		6	10	6	8				8	5500	44000
Dec		5	4	5	5				4,5	5500	24750

	O2 Brixton	4900							Average	Capacity	Average Total
		2019	2018	2017	2016						
Jan		7	4	5	5				5,25	4900	25725
Feb		9	8	6	7				7,5	4900	36750
March		9	12	10	10				10,25	4900	50225
April		7	11	5	5				7	4900	34300
May		8	8	10	10				9	4900	44100
June		6	10	6	8				7,5	4900	36750
July		7	4	6	6				5,75	4900	28175
August		2	5	1	5				3,25	4900	15925
Sept		7	11	8	8				8,5	4900	41650
Oct		15	11	15	15				14	4900	68600
Nov		18	20	19	18				18,75	4900	91875
Dec		15	17	16	?				16	4900	78400

	Scala	1145							Average	Capacity	Average Total
	2020	2019	2018								
Jan	7	2	2						3,6666667	1145	4198,333333
Feb	15	12	4						10,3333333	1145	11831,66667
March	13	16	6						11,6666667	1145	13358,33333
April		13	6						9,5	1145	10877,5
May		19	9						14	1145	16030
June		6	7						6,5	1145	7442,5
July		7	2						4,5	1145	5152,5
August		8	6						7	1145	8015
Sept		8	8						8	1145	9160
Oct		25	18						21,5	1145	24617,5
Nov		23	15						19	1145	21755
Dec		13	12						12,5	1145	14312,5

fig. 4: Example cases of researched monthly events for live music venues in London, O2 Arena (category 7.500/35.000 and up), Royal Albert Hall and O2 Brixton (category 2.500/7.500) and Scala (category 300/2.500)

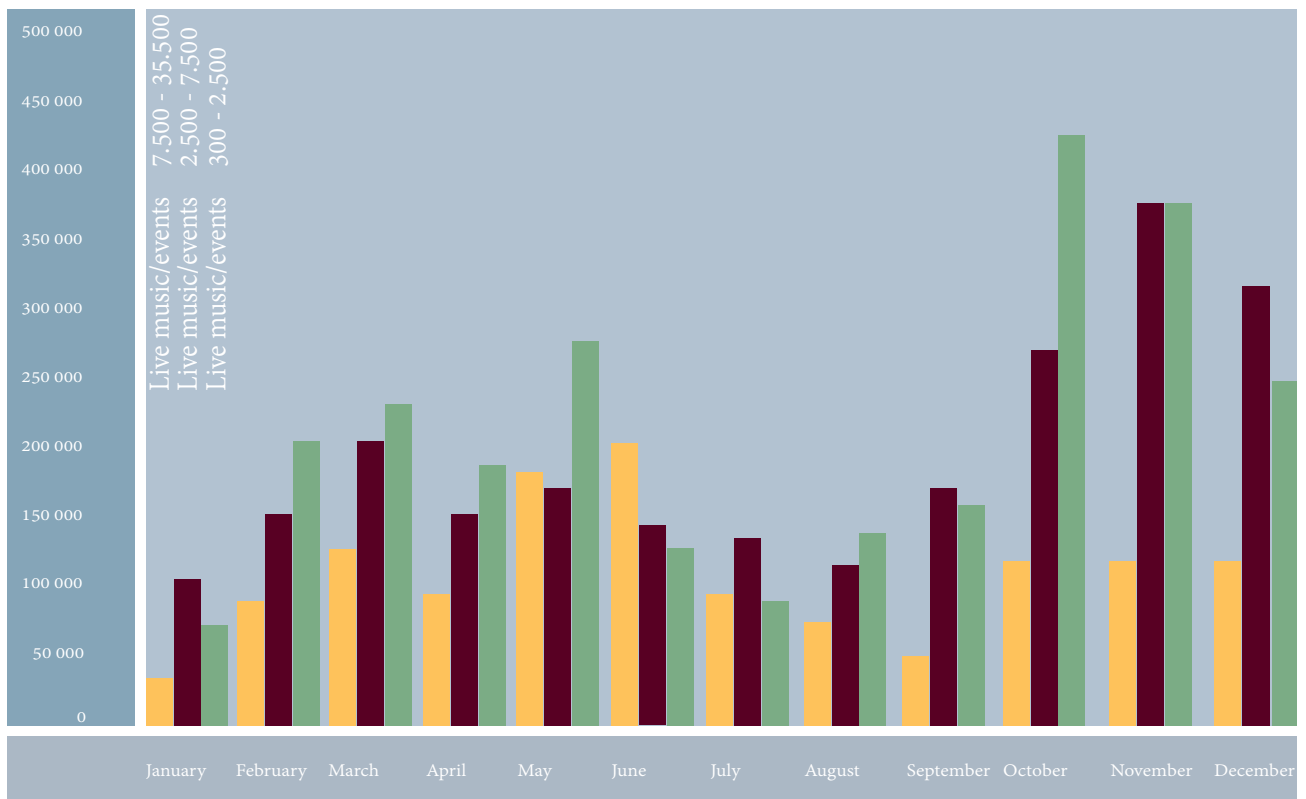


fig. 5: Graph showing 'average flux' of three capacity categories of live music venues throughout the months of the year.

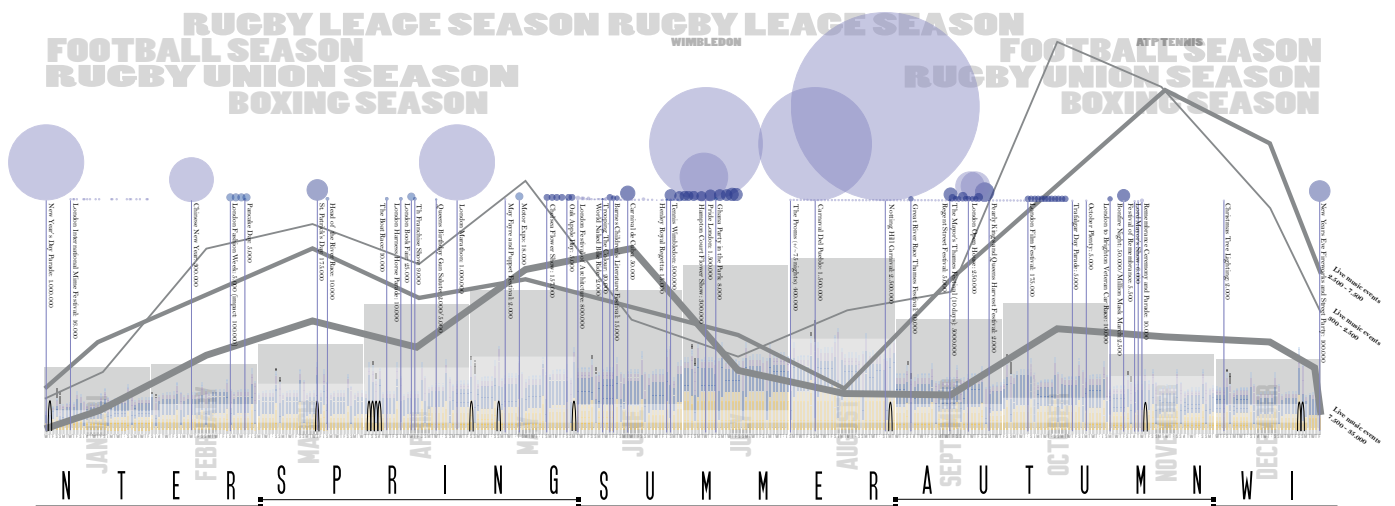


fig. 6: Combined illustration of intensity of analysed actors (sporting season, special yearly events, cinema's, live music venues, theatres, markets, and holidays) throughout the months of the year.

Harking back to Canetti's statement about the ebb and flood of buildings for closed crowds, the parallel with these sudden increases and decreases is interesting. Early on in the process, the word 'sinkholes' proved to be a useful concept to approach the actors or city systems that process a crowd after its discharge. In their writing on 'architecture and the spectre of the crowd', Cameron Logan and Janina Gosseye also make the observation that crowds are often referred to by making comparisons with the characteristics of water: "Crowds are evoked using natural metaphors, especially those connected with water. Crowds ebb and flow, they come in waves and floods or as a "human stream"" (Gosseye, Logan, 2019, P.4).

The comparison with water is especially explanatory for how all this research amounts to the design direction within the scope of this project. In his writing on ANT, John Law mentions philosopher of science Michel Serres who writes about order and disorder. "in his world there are patches of order in a sea of disorder. The most interesting places lie on the boundaries between order and disorder, or where different orders rub up against one another." (Law, 2009, p.144). In this case these patches can be both of order or as disorder, of the discharge or of the 'uncharged city'. However, whether you choose to view this from the one side or the other, these boundaries are always manifestations of the same thing. It is these boundaries that will form the subject(matter) of the design:

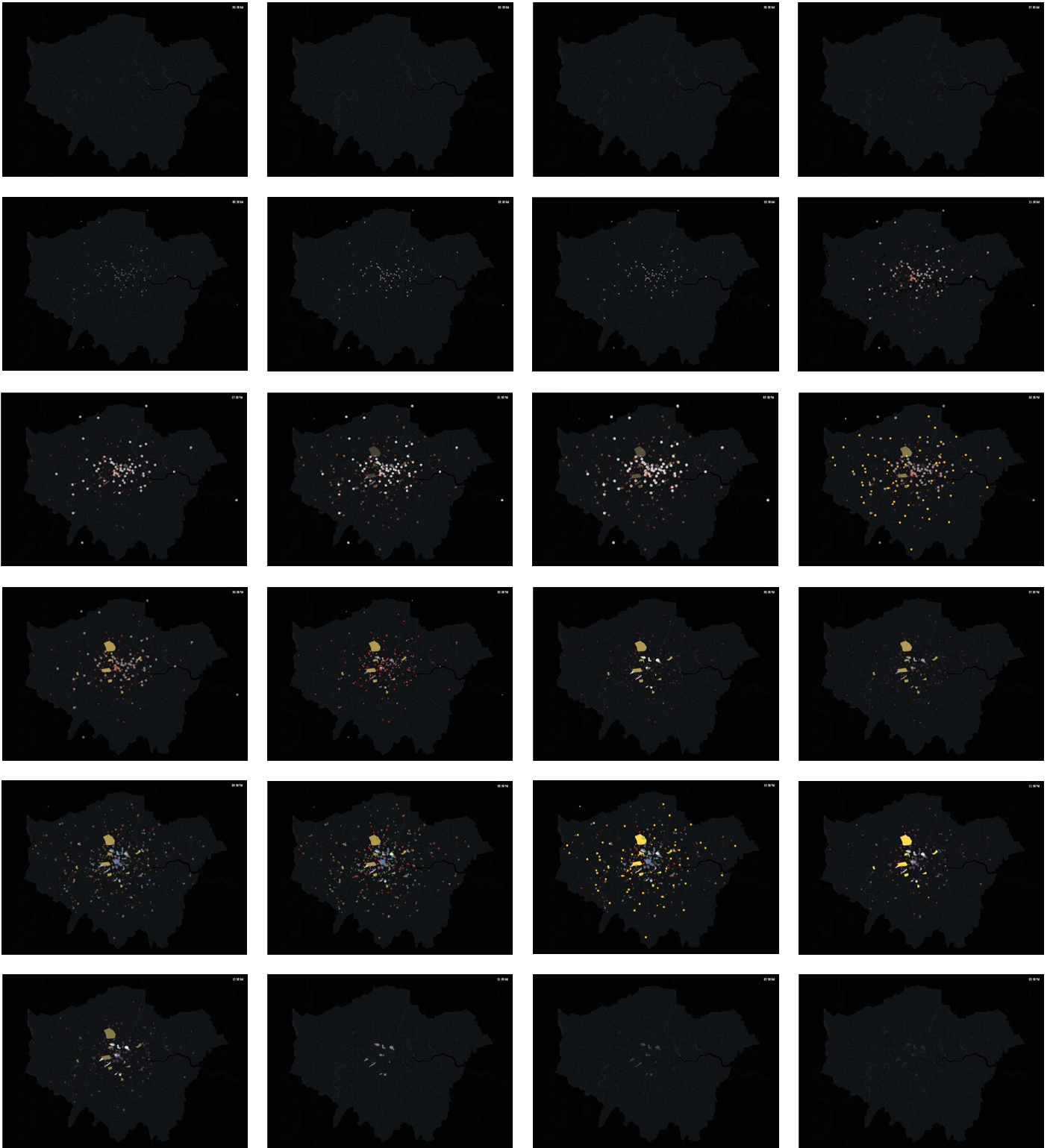


fig. 7: Stills used in the presentation gif to illustrate the activation of the city as a result of discharges of crowds by the different types of Crowd Machine actors (left to right, top to bottom, each slide representing a one hour time period, starting at 4:00 AM)

The Significance of Research

Crowd machines are actors that can cause temporary intensities in the city. A machine needs ‘material’ to operate; in the case of Crowd Machines this working material is a certain type of people. These people have in common that they all need or want a product or a means of fulfilment that can be acquired in, through or from the machine. Each machine is ‘switched on’ in its own cycle or rhythm that regulates the moment in which its crowd arrives or is present and fills the machine, creating Canetti’s closed crowd. Or, in other cases, it is the sudden natural presence of enough crowd to fill said machine that the machine switches on (In reality the second description always applies, as even with planned events, it is not the machine itself that causes the arrival of its crowd). When the machine is filled, it becomes a closed crowd: the ‘material’ becomes a crowd’. Whether the crowd came to buy apples on a market, see a concert in a music venue, a play in a theatre, a football match in a stadium or just stayed out of curiosity for whatever is happening does not matter for the crowd machine. When the machine is done, it switches off: the moment the crowd machine discharges its crowd. The crowd is like a pulse or pulses, given off in the unique rhythm of the machine. The machine stops to enclose the crowd, by closing itself: And again, as Canetti put it “*the building is waiting for them; it exists for their sake and, so long as it is there, they will be able to meet in the same manner. The space is theirs, even during the ebb, and in its emptiness it reminds them of the flood.*” (Canetti, 1984, p.17). ‘It washes its hands off it’: This is the moment the city’s rhythm encounters the rhythm of the machine: its pulse-like discharge.

Maybe only this period of adaptation of rhythms is always, and on every level, the moment temporary intensities are able to exist in the city. The crowd *like water* splashes onto the surface around the machine, and the way the city processes this sudden *flood* is by creating or providing city systems that are able to process or assimilate these crowds: *Sinkholes* as types of infrastructure (in its many forms and gradations of efficiency) such as public transport or, systems that are able to temporarily take in and hold (small) portions of this crowd: *sponges*.

While all these other systems work overtime, the crowd machine is sleeping: an impregnable bastion of fulfilment, an empty statue of the temporary intensity, an ebb reminding of its flood, its own presence of absence. A strange realisation, especially for a city as London, that its renowned ‘crowd machines’, are mostly idle statues of their own residue.

The research considers the effect of London's crowd machine as a collection of unique pulses that rhythmically sweep, or rather flow through the city. As discussed, the temporary intensities that the crowd creates are processed by city systems that are designed to either immediately assimilate them or, for some time hold on to portions of the crowd, resulting in a more gradual outflow. At the same time the crowd machine itself does not sweep or flow at all: 'it waits' as long as it will take to discharge its next crowd. The rhythm of the crowd is almost the opposite of the waiting of the crowd machine: we find these idle statues scattered throughout our cities every day. The crowd machine knows no balance, for the crowd machine its either ebb, or flood. Temporary intensities however, always 'hang in the balance'. It is therefore that they must always flow between one rhythm and the next.

This research provides information sets about different types of flows for different actors. Within these categories of actors, very comparable characteristics can be distinguished. However, at the same time, within each category the individual crowd machines have very unique specifics when it comes to location, size, popularity, rhythms and therefore, impact.

Using this research as a departure point for an architectural design strategy does not mean that one is presented with a checklist of elements to successfully deal with temporary intensities in London. It does however make the argument that when different types of seemingly unrelated actors are considered together as a category of 'crowd machines', their impact together and on each other becomes apparent. If one then considers designing for temporary intensities, the question that arises now is what happens when their architectural component (the crowd machine) is not switched on. The aim is to design the crowd machine not as a 'representation' of its momentary discharge and its lengthy presence – or even (idle) presentation – of absence, but as a symbiotic development or intervention within the rhythm of the city: then always being on the very boundary of its order and disorder. This way, the machine does not sleep, only slumber.

Crowd machines together can become crowd generators.

Reflection

Epilogue

Personal project description

The described process and line of thoughts that can be found in these closing pages is what came together in a design that functions as a first venture into the development process of the Goods Yard site into a crowd generator. The design can be described as an intervention in two fold, there is the implementation of a cultural centre and music school inside the western part of the Goods Yard building, taking advantage of its dimensions, its strong grid of brick arches as a stable mass. Here a set of different practice spaces is implemented surrounding more open and closed spaces that allow more private and more social meetings. By having this social and local program moving into the area in the first stages, the idea is to first involve the direct surroundings and its unique creative character into the development. In a way, the old abandoned Goods Yard crowd machine is first again introduced to neighbourhood rhythms and finds itself inhabited by a new crowd machine.

The roof deck is seen as a mediating and public space with its overgrown roof level slowly being appropriated by more and more crowd machines that are supposed to tap into each other's rhythms, and take use of the underlying structure as a 'bonus'. I conceive the character of the roof deck as a green public space that is able to mediate between and connect the rhythms and flows around the crowd machines on and in the Goods Yard building. Large spiralling ramps will cut through the deck, without having designed them in too much detail, I think that the idea of these giant almost screw like vertical connectors will suit the idea of the Goods Yard becoming a 'machine or generator like' entity. Also I think this quite bold gesture of enormous round spirals sticking high above the deck will grab people's attention, and really almost ironically indicate the action of bridging the distance between street level and the Goods Yard levels. The openings should be tactically be positioned to also form a logical connection with the inner streets in the Goods Yard.

The main part that I designed is the new live (music) venue above the music school. As mentioned, its size and type were derived from my research into the current present music venues and their rhythms. I decided to go for a quite basic layout of the main music room, with a moveable stage in an almost black box like setting. In addition however, I introduced two levels of side balconies of two rows, as well as a larger balcony on the far end of the room. I think that this sort of half defined yet flexible seating/standing layout would work in this side. This is purely based on my own preferences and memories of 'more memorable' concerts that I have seen over the last couple of years. I think it gives a more involved connection between audience and performer.

As a statement I have decided to completely make the building out of wood. A collection of glulam columns, CLT cores and a separate box in a box construction elevated by a giant CLT truss. I think this division into the room itself and the serving parts into two construction types is really fitting and to me is satisfying when comparing it to my initial fascination with the obscuring landscape construction of the Estádio Nacional de Brasília Mané Garrincha by Ícaro de Castro Mello. The busy grid of Glulam columns and retreating floors surrounding the elevated box turned out much different than I initially expected but exceeds my initial ideas as well. However not the most logical option, I think the colliding of two construction types is beautiful. The entire building is conceived without concrete, and gets its sound insulation by use of heavy gypsum elements for mass, and separation between the inner and outer box with the use of different materials for each layer to further prevent vibrations.

The climate concept than also as a statement is largely passive, natural ventilation and a sharing of warmth in the summer and the idea that it is ridiculous that we heat corridors and pass through spaces seems a sound and provocative statement for a music venue in our current profession. A wooden grid of sunscreening hangs from the top of the building, introducing an intermediate space while covering the actual glass façade, creating an interesting interplay of the lines of the separate parts. Once again obscuring and accentuating the actual program, and introducing another box or layering. The building is giving off the idea of landing on the goods yard with an open and receding ground floor foyer.

It is always a crowd machine, but it can be a crowd generator, I did anything I could to at least design it like one.

Graduation Process

To conclude I will briefly reflect on my own 'behaviour' during my design process. The graduation project was a combination of both my most intensive and fruitful weeks, as well as the most demotivating and troublesome moments I have encountered during my entire study. I cannot reflect on my process during these weeks without mentioning the Covid condition. At some point, especially in the later months of the process, working from my home situation basically became impossible. I would maybe find two productive hours during a study day of sometimes up to ten hours. I've doubted my own process more than ever before and got frustrated with it even more often. At this point I'm not sure whether it is because of the conditions of quarantine, and its effects, or that I might always get stuck in these projects. Maybe I have just never invested enough time to properly reflect and research during previous design projects and that this kept my design process open and inspirational for myself. Very practically I have discovered that in the future I will prevent myself from doing such a solo project from (at least my current) living situation. I need space to 'design', not just a small desk or kitchen table, but most of all I need people to talk with about the project and just have an inspiring working environment. It sounds dumb and sort of like self-pity but I am serious when I say that I found out that I just can't do this kind of scale design by myself and without impulses by others. I get stuck in my own thoughts and patterns which I then start to rationalize until they are no longer productive.

I was constantly aware of my own shortcomings concerning the adaptation of my design to my research or the practical execution of building parts/program/etc. but for a long time simply could not break my own patterns. I think the size of my initial plans just became too overwhelming, I got lost and lost overview, which I could not regenerate. However, I think that partly played in my favour, since the current approach of the generator being more a collection of buildings seems more realistic as a working entity, as well as that it then introduces the element of time by taking into account the time that will be in between the completion of different elements of the generator which would not be as much the case with a 'complete' mega structure or mat building or 'whatever'. On top of that I think this introduction of the element of development time to the already existing idea of rhythms and pulses from the research is quite suiting and poetic.

The final weeks I started studying more on Bouwkunde now that this was possible and had joint all day and evening study sessions with friends and fellow studio students which finally provided me with the necessary 'flow' (yes, really) in order to produce what was needed. The final weeks were actually very rewarding for me personally. So therefore, a special thanks to Isaac Vaarzon Morel and Jort van den Broek, along with as always, Bob Dylan and a very special live version of China Girl by David Bowie that basically pulled me through these weeks.

Reflection on design process and translations after Research

With the research as a global frame of thoughts, the process gradually evolved into the design phases of the project. Translating the concept of 'crowd machines' or rather 'crowd generator' into the physical realm, led to a series of (conceptual) hybrid mega forms or structures that would become a foundation as reference projects and precedents. The first stages of this translation process were driven by these precedents, both very conceptual (such as utopian projects as Archizoom's No Stop City, projects by DOGMA, Yona Friedman etc.) and more practical projects. Obviously, well-known examples as Rogers' and Piano's Centre Pompidou or Price's Fun Palace, but just as much stand-alone public buildings and projects such as by Oscar Niemeyer, OMA (ZKM, Seattle Library) and especially Estádio Nacional de Brasília Mané Garrincha by Ícaro de Castro Mello. The latter one was especially of importance because it represents the idea of separation of the different functions of this crowd machine, whereby the traffic spaces almost become a landscape by itself, disguising or obscuring the actual program of the building. Especially within the concept of different 'machines' or actors and their particularities coming together, this has led to a reoccurring fascination.

Bishopsgate Goods Yard Site

This concept naturally collided with the choice of the design site. The approach that was taken to land on certain possible sites directly derived again from the idea of 'flows' in the city as mentioned in earlier parts of the research. This flow – being of a more or less temporary nature - as a leading theme, becomes fruitful when reflecting on 'cuts' in this flow of the city. Meaning, that there are certain spatial or even social/non tangible constructs in the city that form a cut in the otherwise 'flowing' nature of temporary intensities (One could actually argue that the crowd machines themselves form just as much such a 'cut' in the city, where the flow is temporary contained, and later on pours away from).

Spatially, these cuts represent themselves often as a result of infrastructure constructions that serve 'flows' on other levels. Directly surrounding the CAZ (as defined by the city of London), we find these cuts mostly caused by railway or underground infrastructure encountering and adjusting to the very perimeter of the 'active zone'. They naturally, to some extent, establish each other by their existence. Surprisingly, the zones that could be considered as, and act as 'cuts' often already have site specific qualities (size, existing environment, connections etc.) that fitted the global outline of what at that moment seemed suitable for the assembly of a crowd generator form.

The former Shoreditch Bishopsgate Goods Yard was chosen for its size, location, and the unique combination of possibilities for connectivity and use of its remarkable existing structure. The location seems to be a perfect fit. The strict yet open grid of the former goods yard building with its columns, arches, and inner streets in hindsight is almost a spatial representation of a sponge!

During the first steps of the design process, but similarly to some extent up to this point, the connection and approach to appropriate both the seemingly scale-less roof deck of the former goods yard, as well as the spaces enclosed by the goods yard construction and the 'elevated railway tunnel' with its station form(ed) great obstacles. The themes that are of constant importance are the connection between the new and the old constructions, the public and private functions within them and the coherence of the way these things are tying, or coming together into a construct that could pass on for 'what should be a crowd generator'.

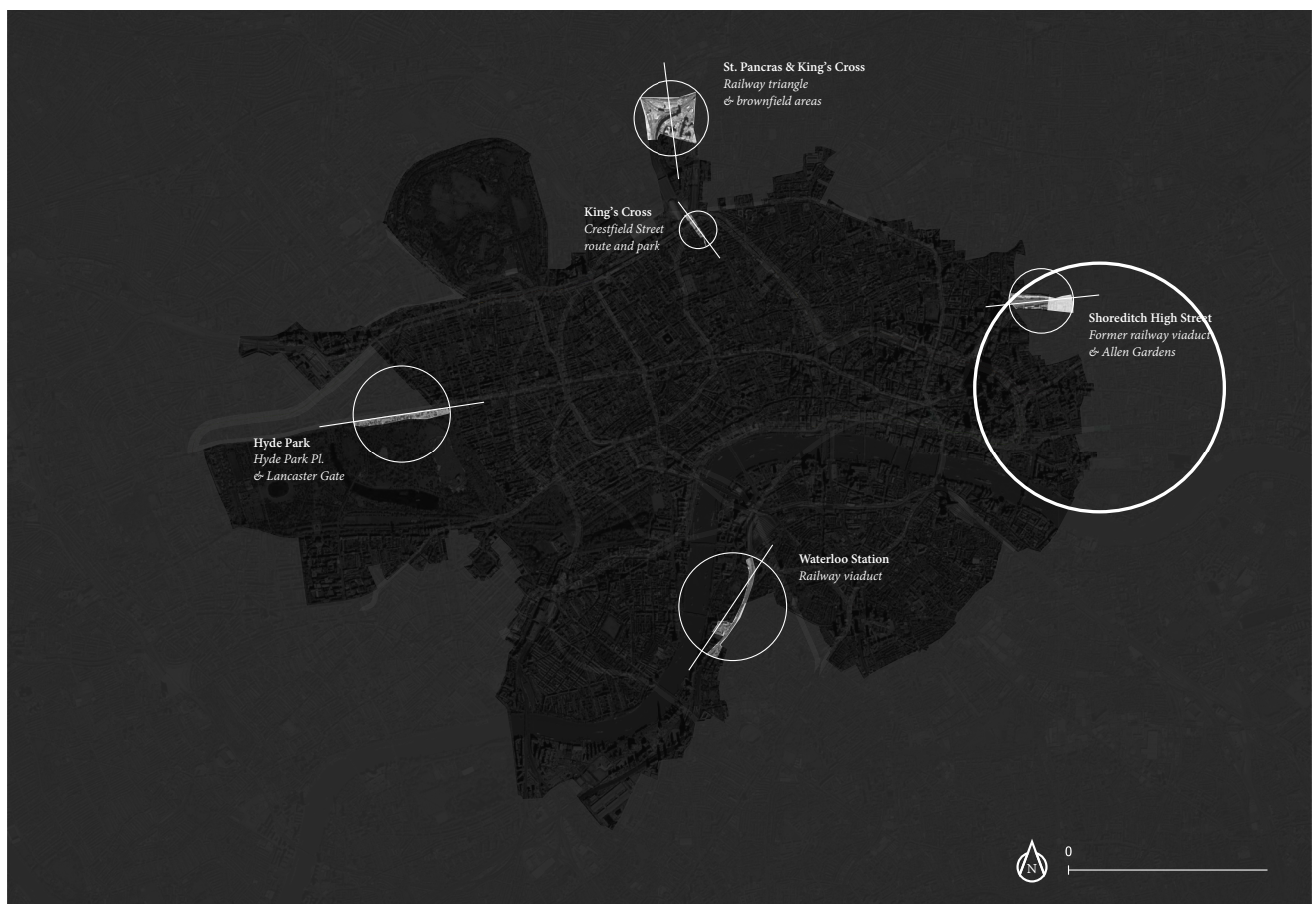


fig. 8: Selection of potential design locations, showing the central activity zone and the five locations that were considered to be 'cuts' in the flow of the city.

As mentioned, the infill of the program of this crowd generator is not a fixed list of elements that need to be implemented in order for my design to be a 'success' according to the research. The result of this coming together of different actors into a crowd generator can simply not be tested beforehand, because of the unique impact – spatially and socially of each individual actor, let alone the different types of actors together. Furthermore, obviously, its success might only be reviewed by years of use after realisation. The strategy however that was adapted, was to make a global plan of actors that according to this research are complementary, both in 'crowd rhythm', sizes and the (social) layers they serve. The program, as a whole aims to implement flexible and cultural program and spaces on both city level as well as on a more social neighbourhood scale. The idea of a music/creative arts venue with a capacity of between 3500/5000 was extracted from the research because it has both the most 'stable' yearly rhythm and is therefore also represented to a lesser extent than the smaller and larger types of such venues within the city (for reference see also fig. 4 & 5 of main essay).

By implementing a music school with multipurpose rooms, along with workspaces and studios, the program should tap into the current character and social layers of the surrounding neighbourhoods. Flexible spaces in, around and on top of the goods yard site could house different programs throughout the day & seasons to cater for the actors within their different rhythms.

These fixed elements that form the core of this project became established quite early on, which proved fruitful to concretize at least some parts of the program of the construct. Meaning, that for example the materiality, structural and especially social (and private vs public) particularities of these actors could be used to inspire, shape (to some extent) and link the other parts into a more congruent part.

The goods yard location that was chosen is roughly 6 hectares in size, with a giant 400-meter-long roof deck that deemed to be almost scale less when placing volumes or massing on it. The argument was made that in order to introduce (human) scale to this roof deck, the design should approach it in the other, narrower direction (roughly around 70 meters). By doing this, the entire form becomes a construct that appropriates both the remaining goods yard building as its roof deck as almost a cross section instead of a volume in linear direction. For a long period of time, this resulted in the idea of creating an elevated construction between the railway tunnel and the goods yard building which would function as some sort of mediating mega structure that both connected (and separated) functions and flows.

Programmatic implications

This element of elevation immediately brings up the question of how this is structurally arranged and with it, how this results in the character of the underlying space. At this stage, the idea of creating this roughly 400-meter-long mega structure in between the goods yard and the railway tunnel, completely out of wood was first introduced. This is both as a statement and personal fascination: one could argue that large scale urban projects such as this crowd generator could still be built with the current habit of constructing these kind of projects just out of concrete and steel, and cover the term 'sustainability' (whatever it may be) by focussing on flexibility, social sustainability, reducing of materials etc. and recycling/reusing principles, but I decided against this out of curiosity and again, as a statement against our current (arguably) slowly adapting discipline.

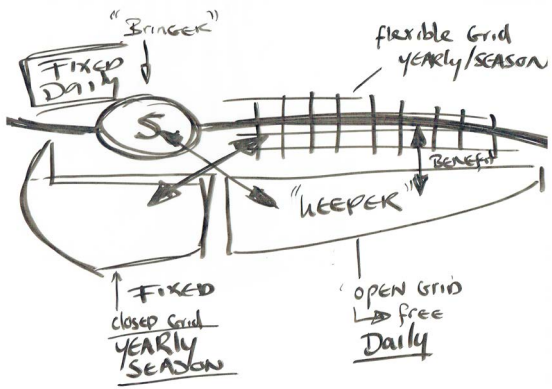


fig. 9: Attempt to distinguish different zone potentials for the development of the Goods Yard, considering the elements of yearly and daily rhythms, as well as potential of the current environment being either adaptable or more fixed.

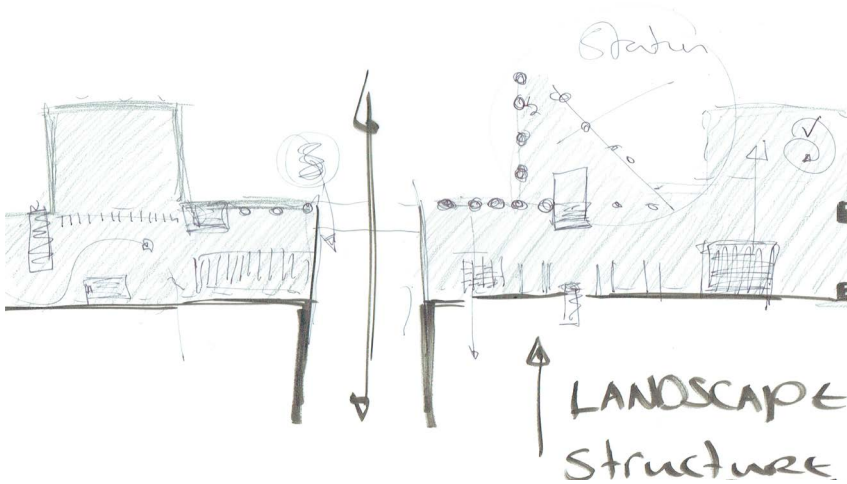


fig. 10: Process of implementation of public program and constructional elements into a landscape of structure. This was later revised in the eventual design.



fig. 11: Sketch of the idea of the generator as a mega structure, looming over the area between the railway tunnel and the Goods Yard

At this stage in my design process, the idea of a mega structure being able to cover the needs of the different actors (as well as them becoming a congruent whole), becoming a connection between the different crowd machines, as well as an access medium between the ground floor, the infill of the Goods Yard and the program on top was found too complex to work out by myself. In a way a major disappointment for me personally, because I considered it both a lack of knowledge, or rather knowhow, but also lack of concentration in my study process: I simply could not generate energy or focus that allowed me to objectively tackle this conceptually on a foundational level. Finally abandoning this idea after weeks of seemingly unfruitful research and approaches however was relieving and opened up the design process in the later stages.

Rethinking and recycling of ideas

With the realisation that the current structure and approach of the generator as a mega structure serving and connecting different levels and uses, both old and new + adapting to different rhythms of temporary intensities throughout its use, only limits itself or (in a shifting way) contradicts its own goals, came the rethinking of the initial idea. As well as my personal vision of what I want my architecture to express, instead of at what at some point had become almost merely dealing with the design as an uncontrollable collection of elements that house its envisioned program and goals.

Out of this point of elaborate reflection, along with revisiting old sketches and ideas, as well as a more distanced re-evaluation of the research results as a starting position, followed a renewed concept to adapt the existing to the new and the new to the existing. I think that (at least the location of the Goods Yard and its unique characteristics) does not suit this kind of non-engaging super structure, as it is one itself already. The idea of the mega structure also being a connector just seemed completely contradicting itself, as I think that a mega structure like proposed could only work once it is itself a functioning body. Let alone the concept of temporality and the shifting types of program.

And this is where all the implications that were derived from the design process at this point were put together to recreate the idea of the goods yard being a sponge, similarly to how sponges were encountered during the research stages. The approach for the implementation of the music school into the existing structure of the western part of the goods yard remains to large extent intact. However, by using the roof deck as a sort of 'permanently used temporality' (yes, really) for different actors (instead of filling up some of the openings with program to connect the different levels and the music venue), the inner streets could be used to 'activate' the program within and around the building. By opening up parts of the roof deck by creating giant spiralling staircase the concept of the Goods Yard being a sponge is further exploited in the vertical direction, maybe for the first time convincingly further connecting the separate parts into a whole.

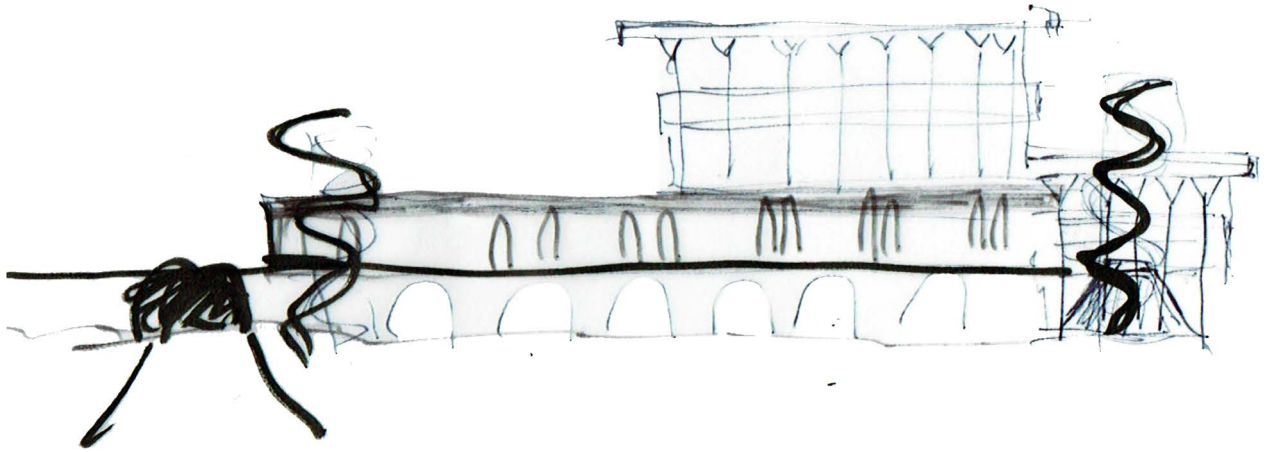


fig. 12: Sketch that inspired the form of the building and the relation with the existing structure after the rethinking of the concept

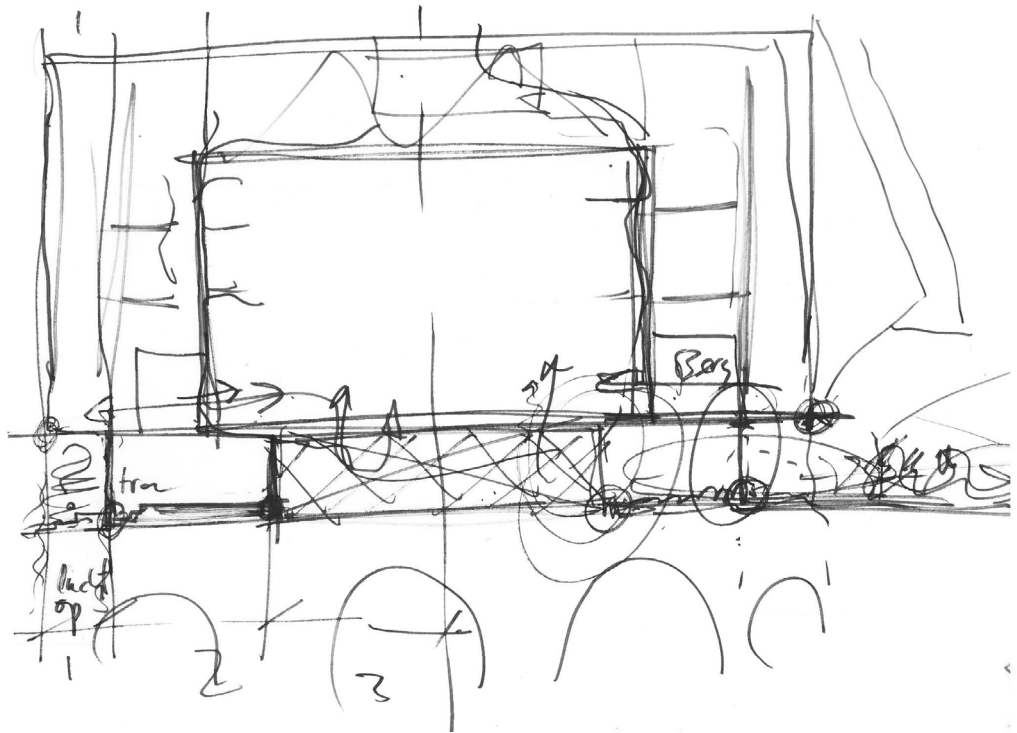


fig. 13: Sketch showing the concept of the separate parts of the building becoming sequences of boxes in boxes, each aiding and defining each other.

I have become convinced that the development of a location such as the Goods Yard should become much more a collection of individual crowd machines together instead of such a mega structure or Mat building. This way, the concept of the existing structure combining the one type of crowd machine with another and another also becomes much more fruitful. At the same time, the development process of different elements in a framework over a longer period of time also introduces a new element of 'completion time' to the mix. In connection with the rhythms of the crowd machines themselves, this becomes both a quite useful and almost poetic foundation for the project, while also allowing for time to steer or fine tune the development in later stages.

This also was a realisation moment that within this research and design project, the complete development could never be in my hands. In a way, this was always clear from the moment the site was chosen, but eventually got lost, to me at least. I can sketch or rather propose the basic outlines of the development as a whole, but only develop a limited part as a starting point. The idea of the implementation of social and local infill in the form of the discussed cultural and music school moving into the current structure and really making use of its unique characteristics as a first step, and the further design of a flexible and anticipating venue for live music and performances on top of the roof deck seem to be just as much a prove of concept as the fully developed site might be, as long as these elements themselves form a congruent whole according to the outlines of the research.

Please revisit the 'personal project description' for a chronologically complete reflection line.

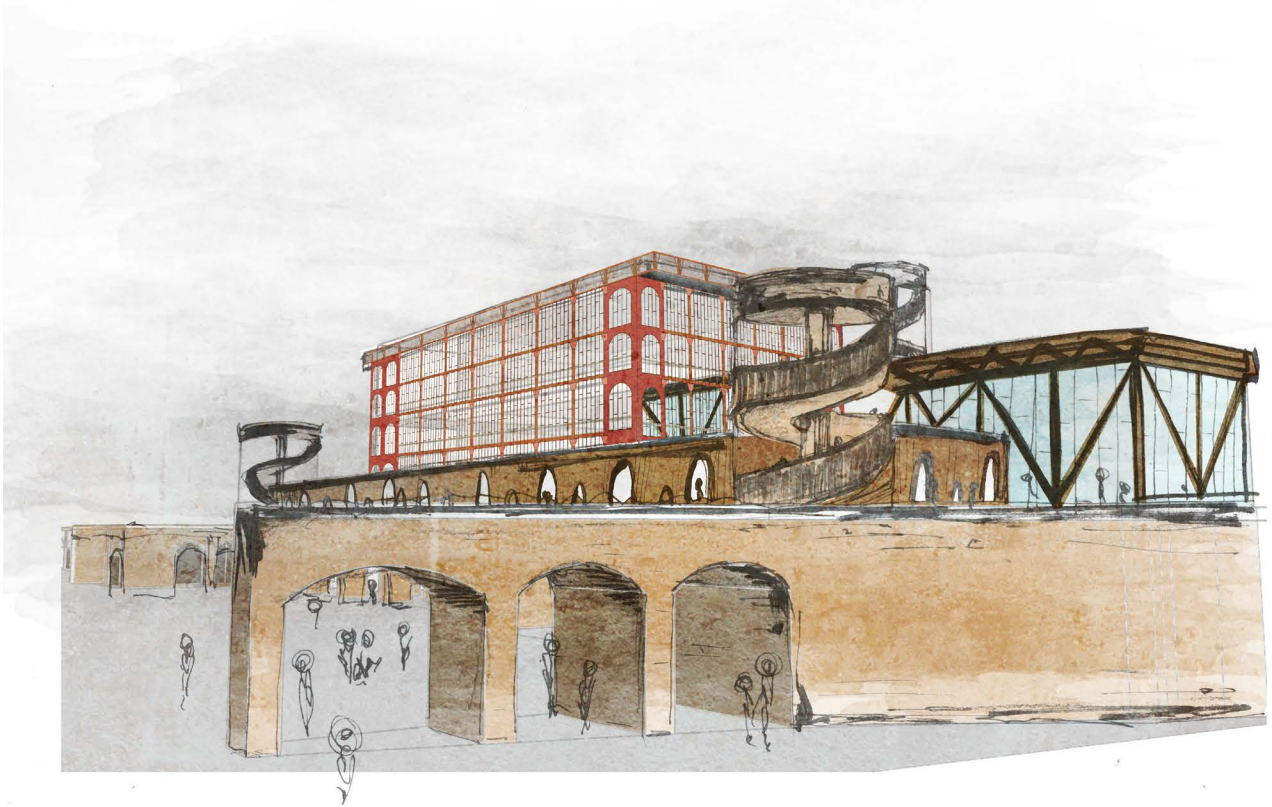


fig. 14: Visualisation of the design during P3 presentation, already outlining its eventual shape.

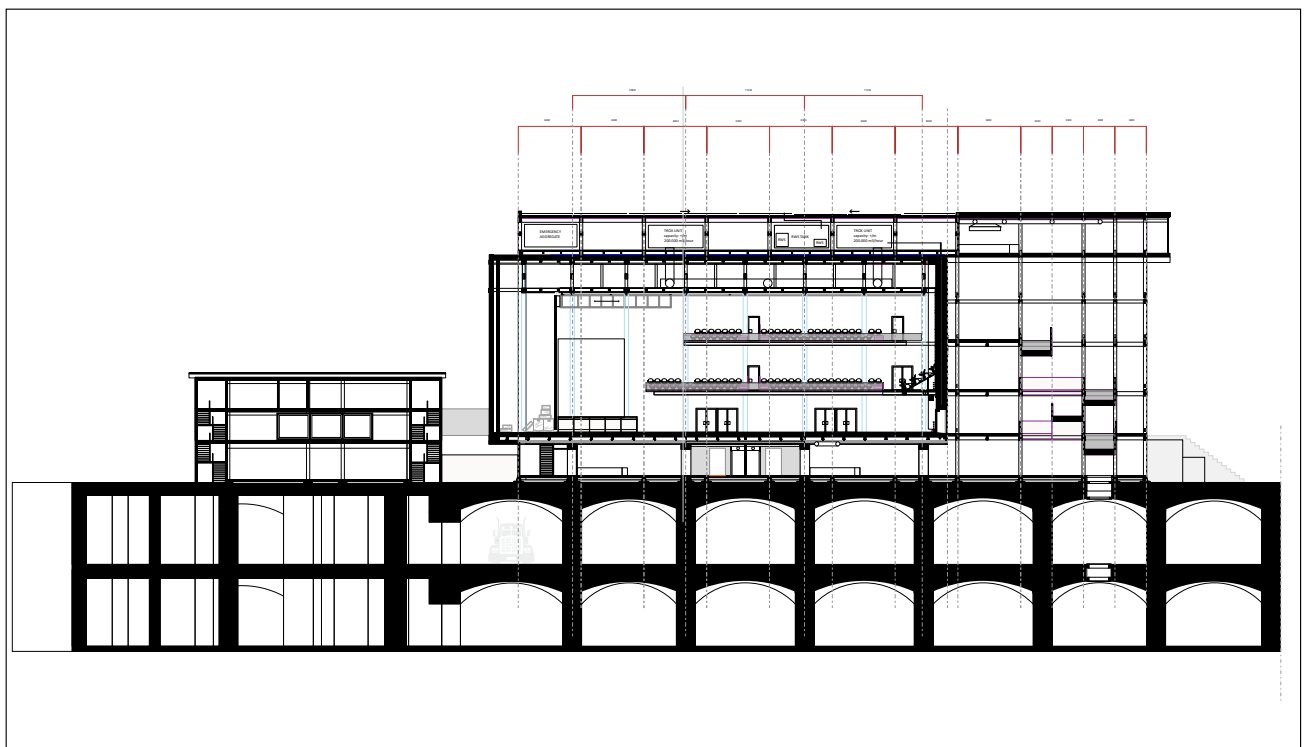


fig. 14: Section showing the building as a collection of boxes in boxes (in boxes) on top of the Goods Yard.

*They say ev'rything can be replaced,
Yet ev'ry distance is not near.
So I remember ev'ry face
Of ev'ry man who put me here.
I see my light come shining
From the west unto the east.
Any day now, any day now,
I shall be released.*

*They say ev'ry man needs protection,
They say ev'ry man must fall.
Yet I swear I see my reflection
Some place so high above this wall.
I see my light come shining
From the west unto the east.
Any day now, any day now,
I shall be released.*

*Standing next to me in this lonely crowd,
Is a man who swears he's not to blame.
All day long I hear him shout so loud,
Crying out that he was framed.
I see my light come shining
From the west unto the east.
Any day now, any day now,
I shall be released.*

B. Dylan

