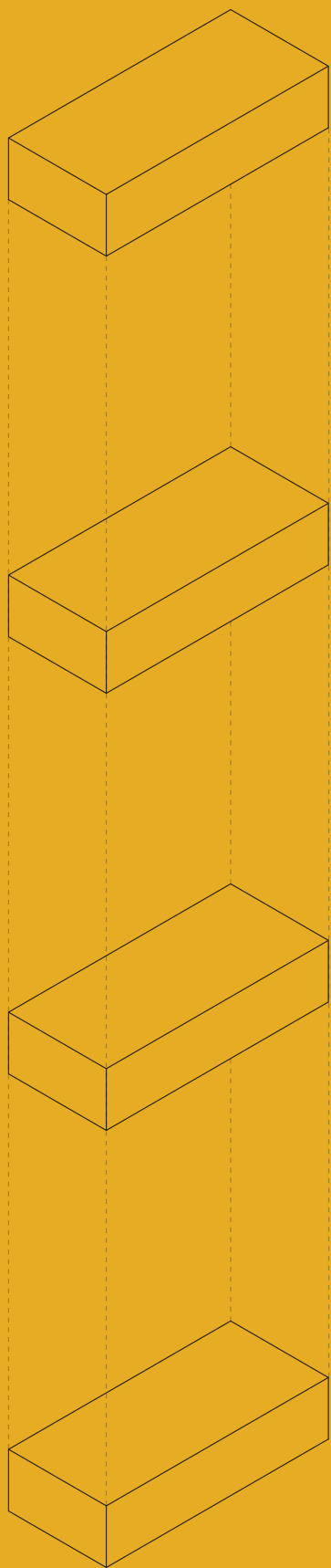


ENABLING INNOVATION

INSPIRING ORGANIC GROWTH AND RESILIENCE - PERTH CREATIVE COMMONS

PART II



CALLUM O'CONNOR

SUSTAINABILITY IN CONTEMPORARY CITIES | UP52003

UNIVERSITY OF DUNDEE



Contents

A Revolution in Education

In order to understand creativity and its place in culture, it is essential that education is addressed. Education is often the first step in a person's journey to a professional career and securing future employment. It is also perhaps the most influential factor on the trajectory of a human life.

Exploring Massive Small

The 'Massive Small' movement is inherently linked with the development of creative, innovative communities. 'Massive Small' actively encourages the development and empowerment of the individual to take control of their environment. It also aims to bridge the gap between the 'top down' and 'bottom up' through effective frameworks and policies.

Enabling Innovation

Certain conditions must be met for creativity and innovation to thrive. These include both physical, social and political factors. In order to effectively tackle the Perth strategy it is crucial that these principles are explored.

Appendices

References

Fig. 1 Perth City Center, Scotland



Introduction

In order to understand creativity and its place in culture, it is essential that education is addressed. Education is often the first step in a person's journey to a professional career and securing future employment. It is also perhaps the most influential factor on the trajectory of a human life. It is a system that was born out of the need to create skilled workers in order for countries to effectively participate in the industrial revolution. In keeping with the times it followed a similar factory model, created to produce an industrialized workforce. Since its conception, the economic climate has gone through several shifts, yet the culture of education has remained rigid. The world is no longer in need of a mechanized education system but instead an organic one. Sir Kenneth Robinson PhD expresses the need for a revolution in education. This paper will explore that need and its importance to the future of the creative industry, urban planning and human life as a whole.

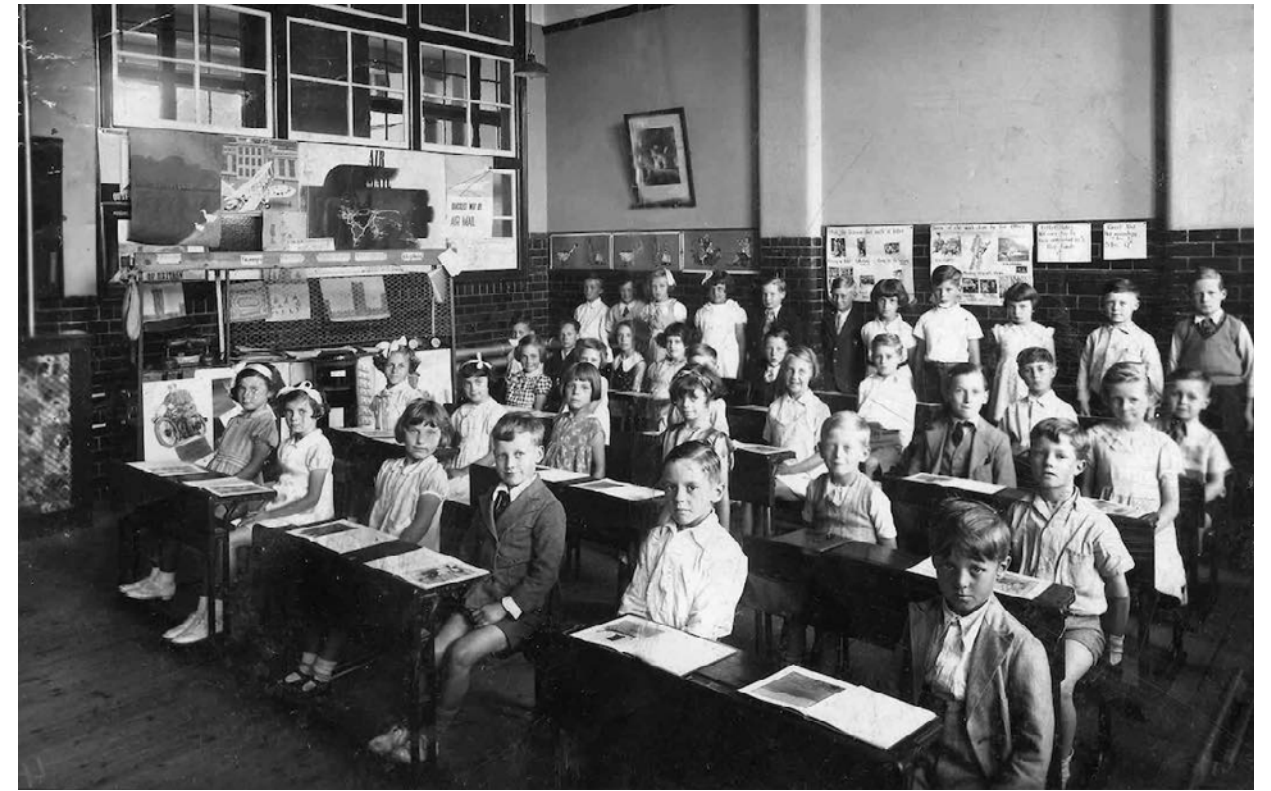


Fig. 2 Early 1900s Education



Fig. 3 Modern Education

Right | Left

We are now entering an era in which individuals can engage the ‘Right’ side of the mind more often. One in which members of society feel a greater level of fulfilment within their professions over logistic driven occupations. This can be attributed to the consistent pursuit of perfection and efficiency. It has resulted in a condition in which humanity has collectively rendered a large portion of the jobs within the analytical sphere obsolete. Many logic driven tasks have been perfected to a point in which programs, algorithms and AI are capable of taking over. However, this should not be seen as a curse but instead as a gift - it now frees society to focus on the underdeveloped creativity driven tasks, which are inherently suited to the human mind. Human ingenuity is the characteristic that makes our species unique. Creative tasks are often attached to the talents we possess as individuals and when utilising these talents, it can bring a greater sense of fulfilment, joy and overall well-being.

In 2018 the creative industry made up a reported 6.55% (Statista, 2018) of the total jobs in the UK. In 2015 the European average was 7.5% (UNCTAD, 2015). However this only accounts for the traditional creative industries, excluding tech, engineering and science which accounts for the third largest economic sector. Additional statistics can be found in the appendices. Creativity is an abstract term, it can be found across the economy in various forms. The market should aim to harness the talents and aspirations of individuals in order to drive growth and achieve greater

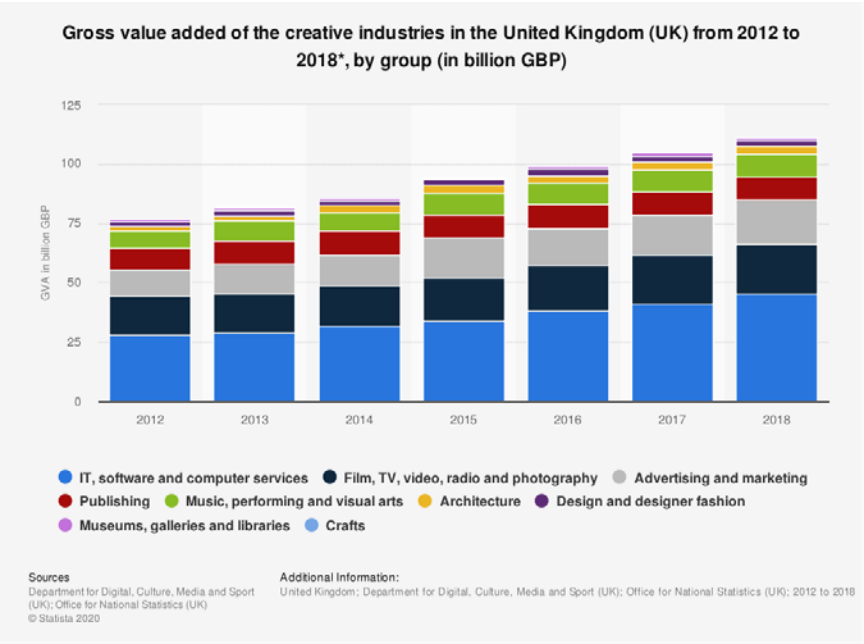


Fig. 4 Gross Value Added of the Creative Industries in the UK

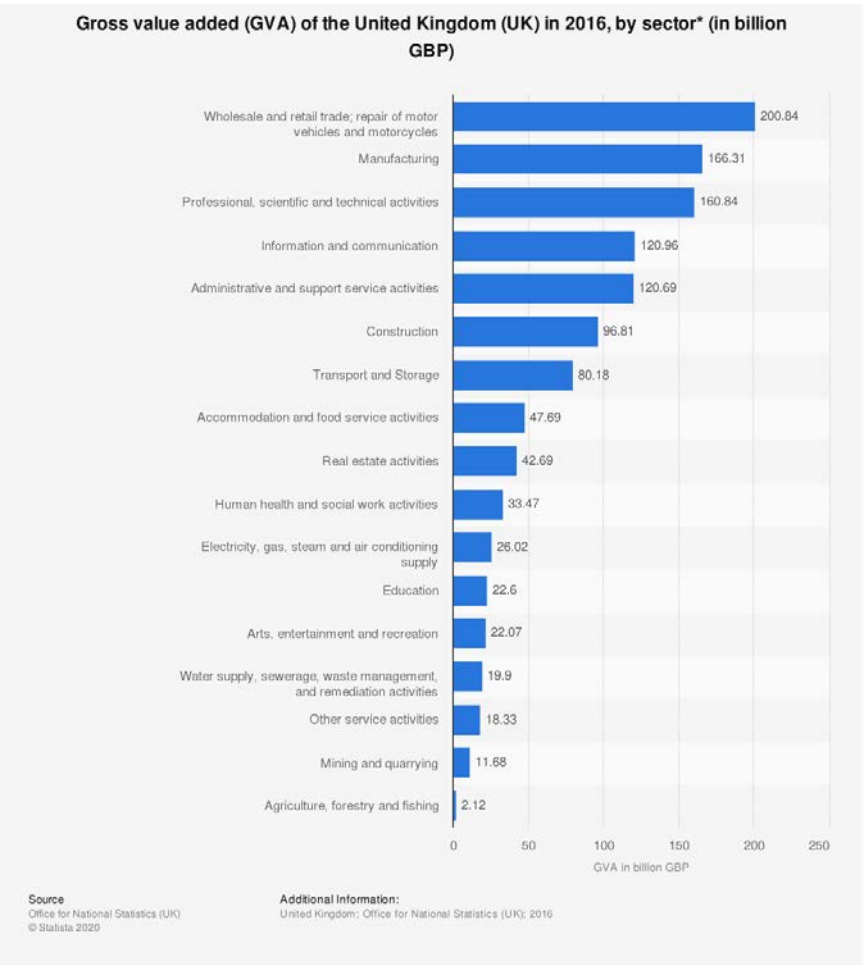


Fig. 5 Gross Value Added of the UK in 2016 by Sector

Fig. 6

success.
Health and Well-being

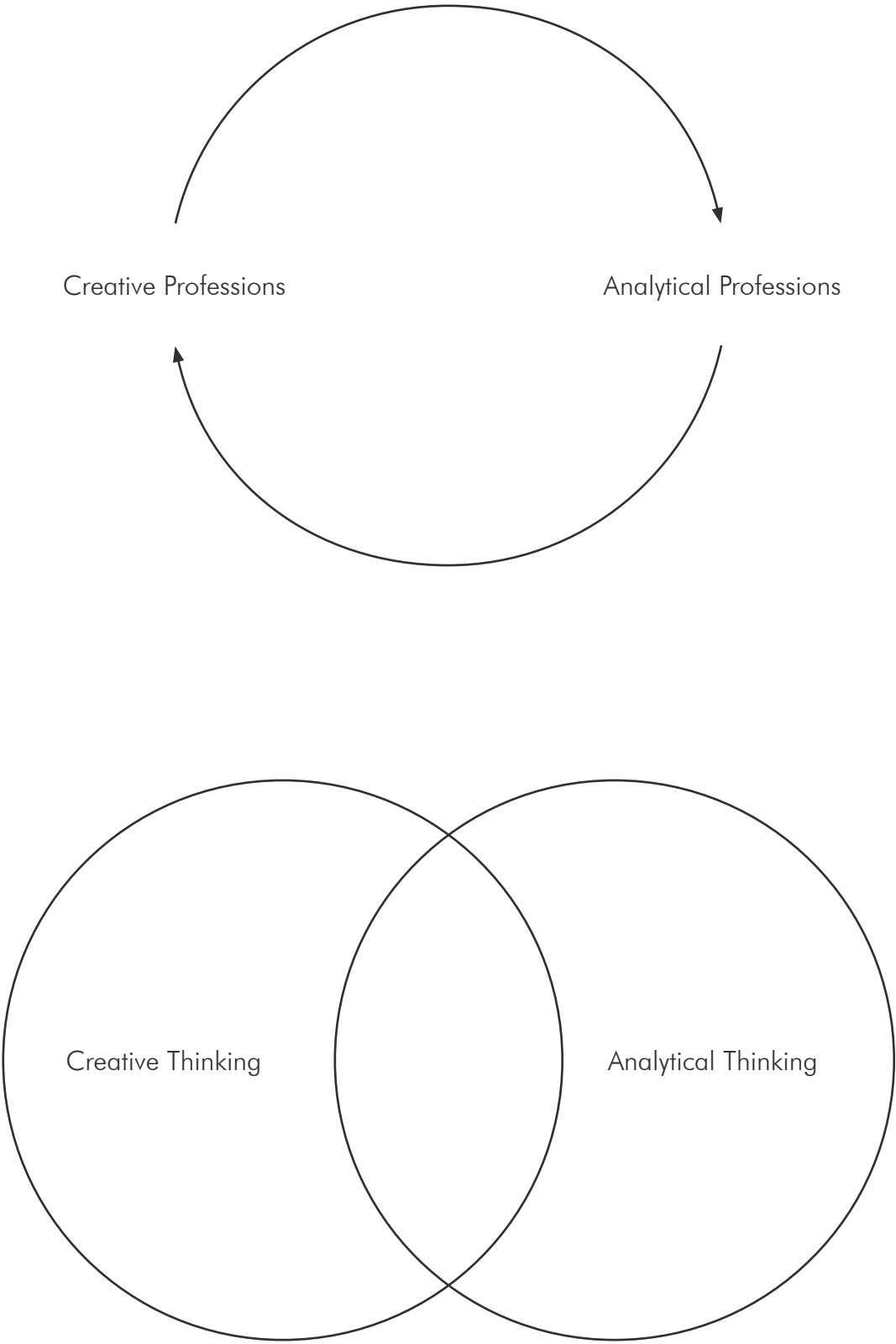
The real challenges arise when society squanders human ability, instead treating humans as machines. Menial tasks are one of the greatest tragedies facing humanity and thanks to the innovations and sacrifices of our predecessors it does not have to be this way. Technology should be entirely capable of eliminating the most gruelling tasks. This prevailing sector of employment is helping fuel a severe health crisis in depression, with the known worldwide cases estimated to be over 264 million (*WHO | The Lancet, 2018*)

“Close to 800 000 people die due to suicide every year. Suicide is the second leading cause of death in 15-29-year-olds.”

(World Health Organisation, 2018)

The World Health Organization (WHO) marks depression as indicator 3.4 within the Sustainable Development Goals. It aims to reduce the mortality rate from non-communicable diseases by a third “through prevention and treatment, and promoting mental health and well-being.” (*WHO, 2018*)

The WHO highlights the need for collaboration between education and other facets of society in order to tackle the issues of depression. It states that no single intervention on its own can lead to long lasting change, the issue needs to be tackled collectively.



Popular culture has raised social matters in countless forms, offering an abstracted depiction of societal issues. This format can prove useful when analysing these concerns and presenting them in a creative way. There is an effective commentary present in Director Bong Joon-Ho's 2019 movie *Parasite* and 2013 movie *Snowpiercer* which explore issues present in modern society such as class hierarchy, conformity and the power of knowledge. In both films' human individuals can be found acting out mechanical tasks. In *Parasite* the character Geun-Sae secretly operates the 'automated' lights out of admiration of a higher societal figure which unknowingly provides him with food and shelter.

*"Geun-Sae: Mr Park, You feed me and house me. Respect!
Kim: You do this every day?
Geun-Sae: Sure, I even send whole sentences to thank him (Morse Code)"*
(*Parasite*, 2019)

In *Snowpiercer* social hierarchy is particularly relevant as a comment on the current education culture. The plot establishes that due to a climate disaster - as a result of human actions - the last remaining members of society must ride a self-sustaining train continuously around the earth, as the only remaining bastion of life. The train is broken into a social class hierarchy with the members deemed of least value at the back of the train, suffering from starvation and other horrendous conditions. It is later revealed that children from the back of the train who have been abducted are in fact keeping the train in service (society) acting as mechanical components carrying out repetitive tasks within the train's machinery.

The plot can be interpreted as a comment on the mechanization and industrialization of the education system as children are treated as a commodity used to maintain the engine of society.

"Wilford (overseer): Thank goodness the tail section continues to manufacture a steady supply of kids so we can keep going manually"
(*Snowpiercer*, 2013)

The movie also plays with linearity as they move between train carts ending in a climax which sees characters breaking the system by moving laterally, blowing open one of the exterior train doors. This allows two key characters, one of which is a young child, to exit into a world that society has deemed uninhabitable.

*"Teacher: If we ever go outside the train?
Children: we all freeze and die!
Teacher: If the engine stops running?
Children: We'd all die!"*
(*Snowpiercer*, 2013)

The plot draws parallels with an education system which discourages the pursuit of professions that do not hold a proven economical value, and are deemed hazardous. The movie suggests the idea of breaking conformity and moving laterally into an uncertain, yet likely, better world (condition). The movie also addresses the weaponization of information and its ability to ensure co-operation and conformity.

"By using imagery that turns information into a deadly weapon, both films bring up the idea that psychological constraints are as powerful as physical ones."
(*Insider*, 2020)



Fig. 7 *Snowpiercer*



Fig. 8 *Parasite*



Fig. 9 *Parasite*

Fig. 10 Industrialised Education System

Balancing Standardization and Individualism

The education system for the last 200 years has had one goal, the production, standardization and labelling of human resources. Often the process aims to manufacture citizens which fit the archetype of a logic driven thinker. It is also a system which focuses on engaging in the task of teaching rather than achieving it, manifesting in a system dominated by testing rather than learning.

“There is a difference between the task and achievement senses of verbs. You can be engaged in the activity of something, but not be achieving it, like dieting. A teacher may be engaged in the task of teaching but not actually fulfilling it. The role of a teacher is to facilitate learning. That is it.”

(Sir Kenneth Robinson, 2013)

This process leads to an unbalanced system which favours analytical tendencies over creative characteristics. This has created a condition where millions of children are being left behind by the education system, never going on to discover their talents. They are often left feeling ashamed and resentful as they lack aptitude in subjects favoured by outdated notions, which adhere to an economic climate that no longer exists.

“Many of our ideas have been formed, not to meet the circumstances of this century, but to cope with the circumstances of previous centuries”

(Sir Kenneth Robinson, 2013)

At each stage of the cycle individuals drop out of the system not because they failed classes but because the system failed them. No child is unreachable. Instead it becomes a question of whether management believes the child is worth reaching.

“Every student that drops out of school has a reason for it, which is rooted in their biography. They may find it boring, they may find it irrelevant, they may find it at odds with the life they are living outside of school. There are trends, but the stories are always unique”

(Sir Kenneth Robinson, 2013)

The system simplifies the many complexities of child into a single number which can be assigned a value. Like many other social constructs, it converts human beings into statistics in the misguided pursuit of achieving a perpetual cycle.

“Somewhere in the back of the mind of some policy makers is this idea that if we fine-tune it well enough, if we get it just right, it will hum along perfectly into the future. It won’t, and it never did.”

(Sir Kenneth Robinson, 2013)

The education system can no longer use the excuse of dropping a child for the benefit of the other students. A school should not be in a position where a handful of “problematic” pupils can challenge its stability. Teachers and students should be supported at every stage of the learning process in order to address the root causes. Society should not accept an education system which trades individual lives under the guise of benefiting the many.

- Analytical Tendencies
- Creative Tendencies

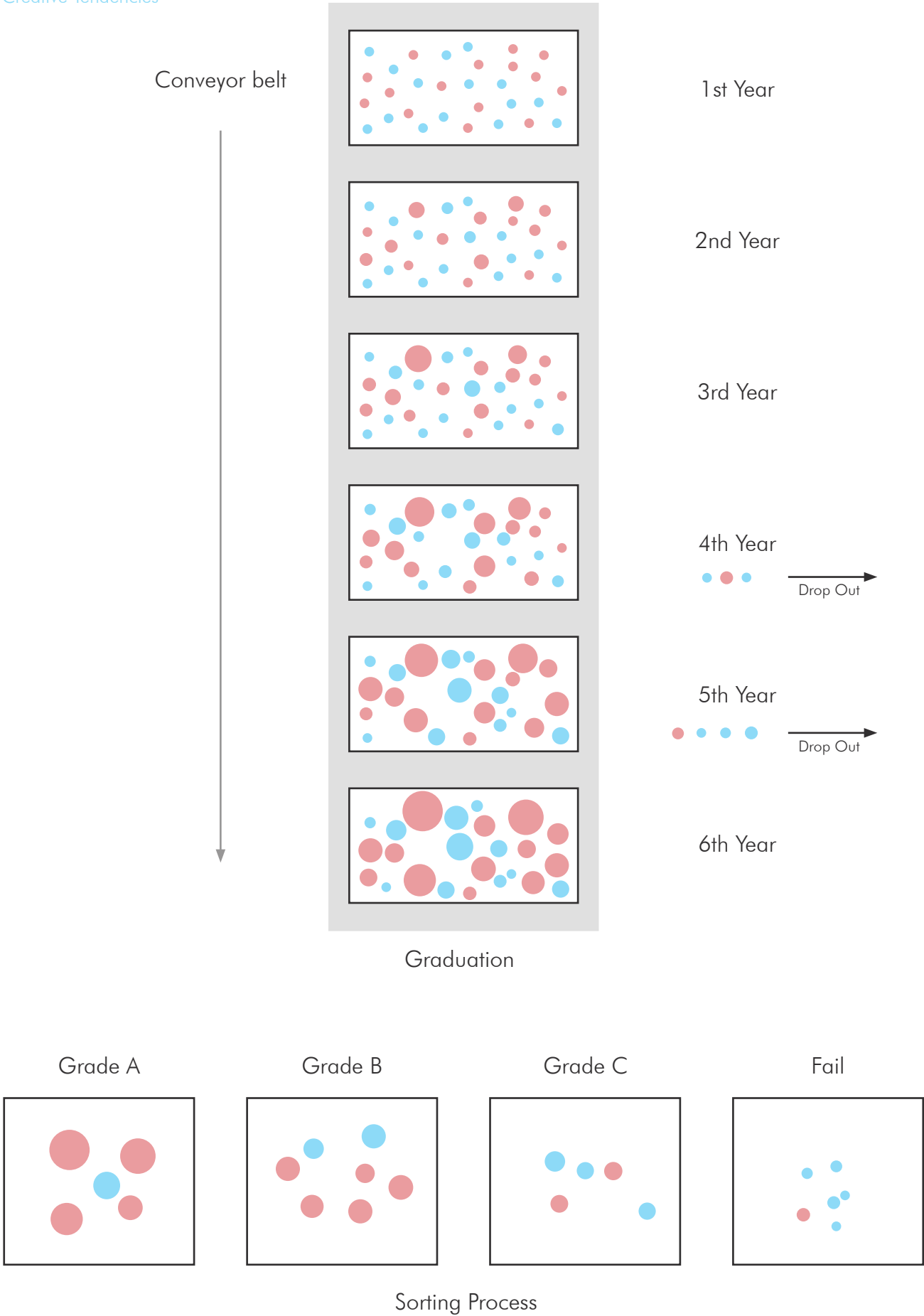


Fig. 11

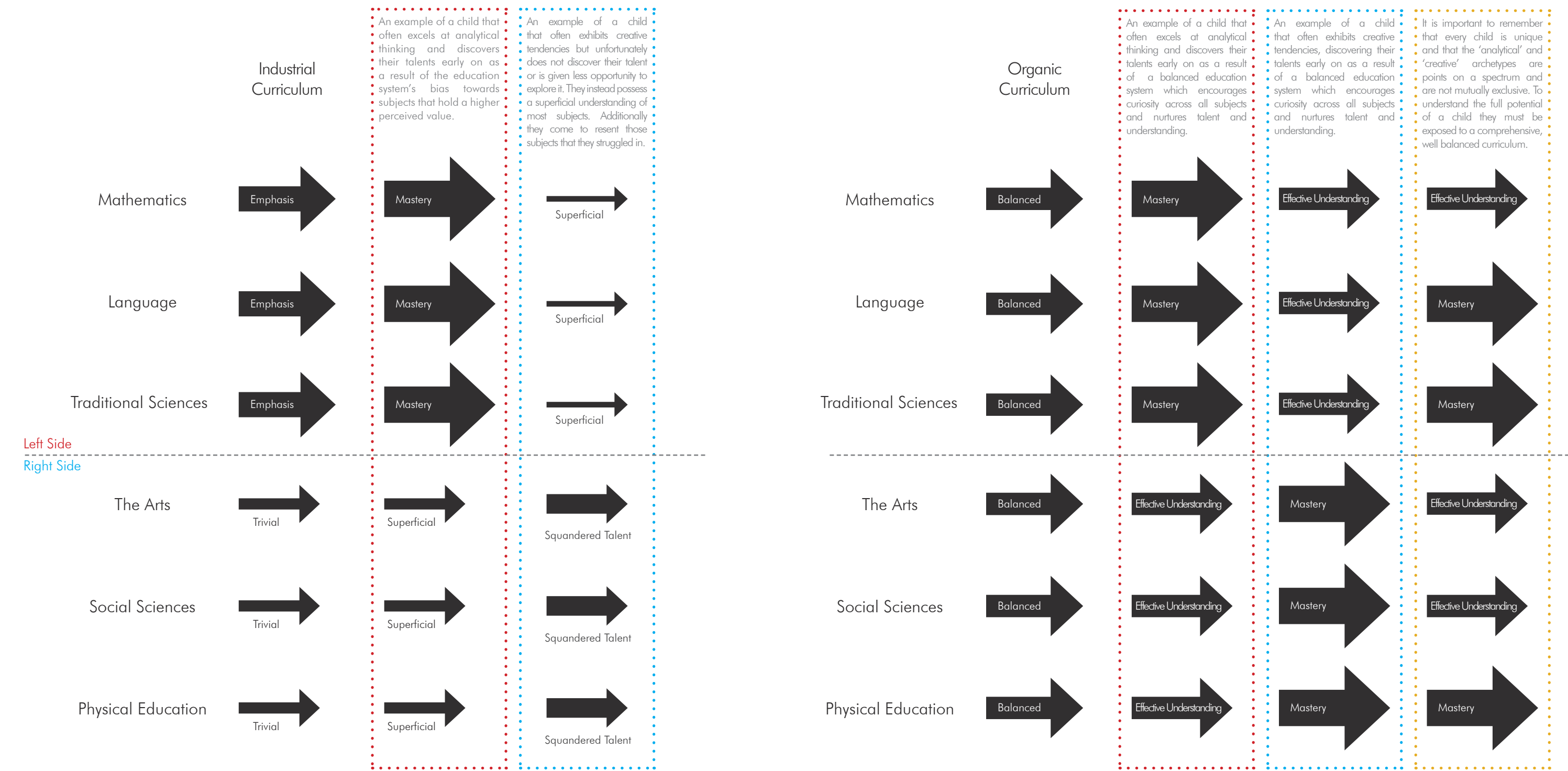


Fig. 12

Uncovering Talent

Teaching should be focused on nurturing curiosity and destigmatizing a lack of knowledge when an individual is willing to admit their shortcomings. Curiosity is the sustainable engine that drives learning and often the only mechanism capable of fulfilling it.

“If you can light the spark of curiosity in a child, they will learn without any further assistance. Children are natural learners.”

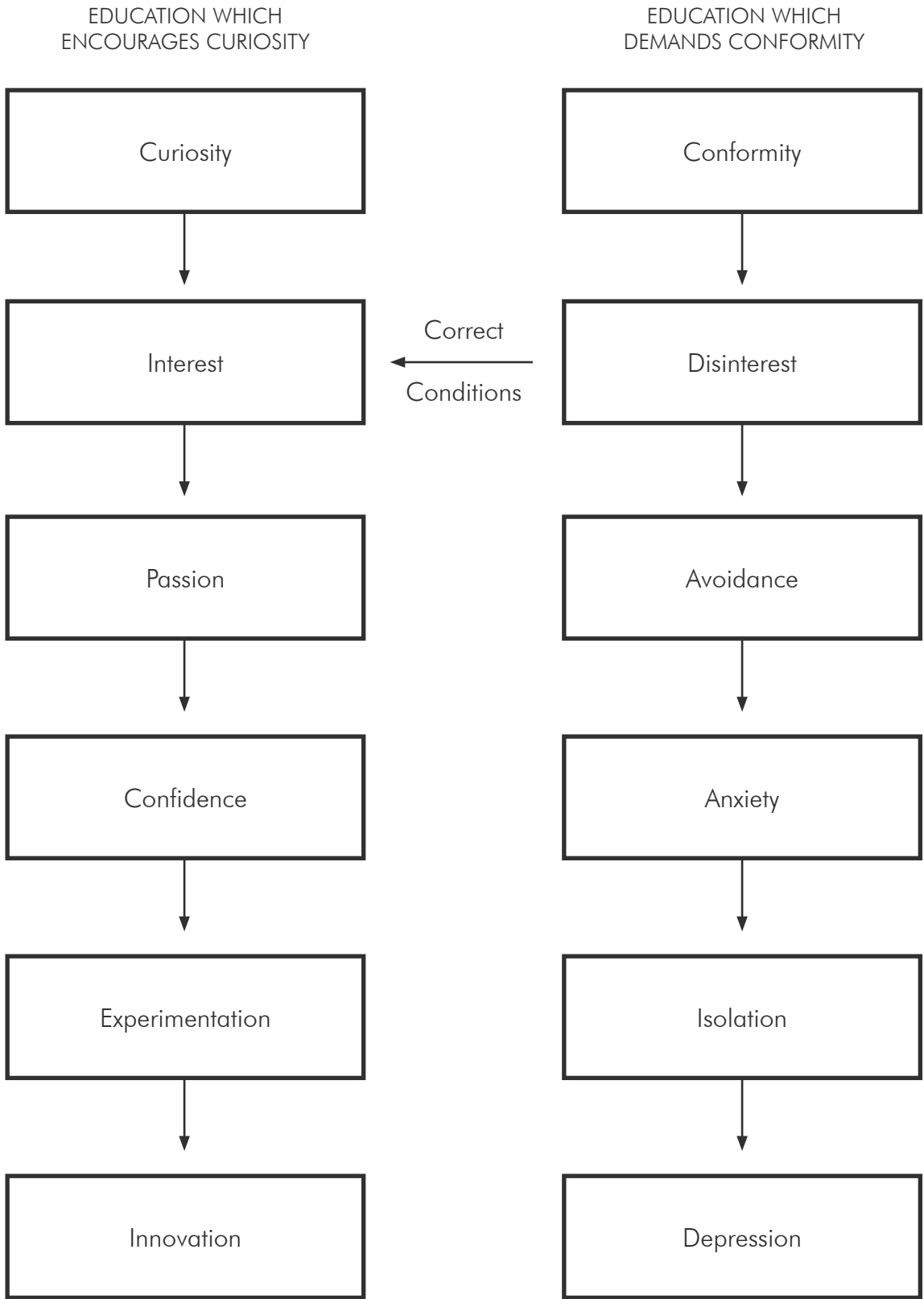
(Sir Kenneth Robinson, 2013)

This should also be supported by teachers who, in the words of Kenneth Robinson: “mentor, stimulate, provoke and engage” that curiosity. The current culture of education has taught us that there is one correct answer, and the professional world has affirmed this claim, in the process stifling creativity, innovation and potential. Ironically this translates to lower economic output and efficiency from employees.

“Knowledge is not about what you know, its about what you don’t know and being prepared to say - I’m going to find out”

(Sir Kenneth Robinson, 2013)

Ken Robinson states that every child has one if not many talents. They can often be buried deep within the individual but under the correct conditions will flourish. This is why it is so important that schools offer a broad and balanced curriculum which allows for experimentation and exploration. It is also key that the system allows for discretion and flexibility from teachers, parents and students. The system must ‘disenthrall’ from the idea of efficiency in standardisation and instead place power in a decentralised system which is informed by the individual. In the age of AI this should be perfectly achievable. As Ken Robinson demonstrates, testing should be used for diagnostic purposes as well as a certain level of clarity for employers but should not be the soul focus of the school system.



Into the Future

It is impossible to accurately predict the future. Large scale human-based systems are inconceivably complex. At any given moment individuals are causing profound effects that are felt around the world. Every member of society reacts to and processes interactions with other individuals, influencing and inspiring new ideas and driving creativity in a never-ending cycle of chaos. Minor actions of individuals will inevitably affect the lives of others whether directly or indirectly, this creates constant cascades across society. An example of the struggles when predicting human behaviour can be seen when investing in the stock market. The process takes an astronomical amount of research and data with many experts, including Warren Buffet, arguing that this method has little to no effect on success.

You can, however, anticipate the future and be prepared for probable outcomes. The responsibility of governments and planning is to offer a guiding hand which nudges this complex system in a positive direction by creating conditions which allow for success. It is not so much predicting and manufacturing the future but instead growing and nurturing it. Whether success is achieved as predicted or not, the conditions offered will often advance society. The aim is to create conditions that allow for the optimal scenario conceivable at the time of the policy's implementation. It must also offer the flexibility for society to adjust the trajectory and allow for a revised outcome informed by creativity, innovation and improvisation.

Striking a balance between flexibility and oversight is essential. It affirms a popular slogan which once hung in high schools across the country. 'Aim for the moon, and if you miss you will still land among the stars'

It is essential that urban planning remains focused on the study of human beings, both the physical human aspects as well as the spiritual sense of being. Urban planning should above all else ensure health and well-being, caring for the physical and the spiritual. In order to achieve this, it is important to encourage creativity and freedom, but still offer a framework of support. It must also balance those aspects of individualism with the systems that are integral for society to function. Humanity works best when it is a whole. Naturally, the complexities of human life and societal instincts address most concerns. However, there is also a need for standardization in areas to allow cohesion on larger scales, although it must always support creativity and individualism, not hinder it.

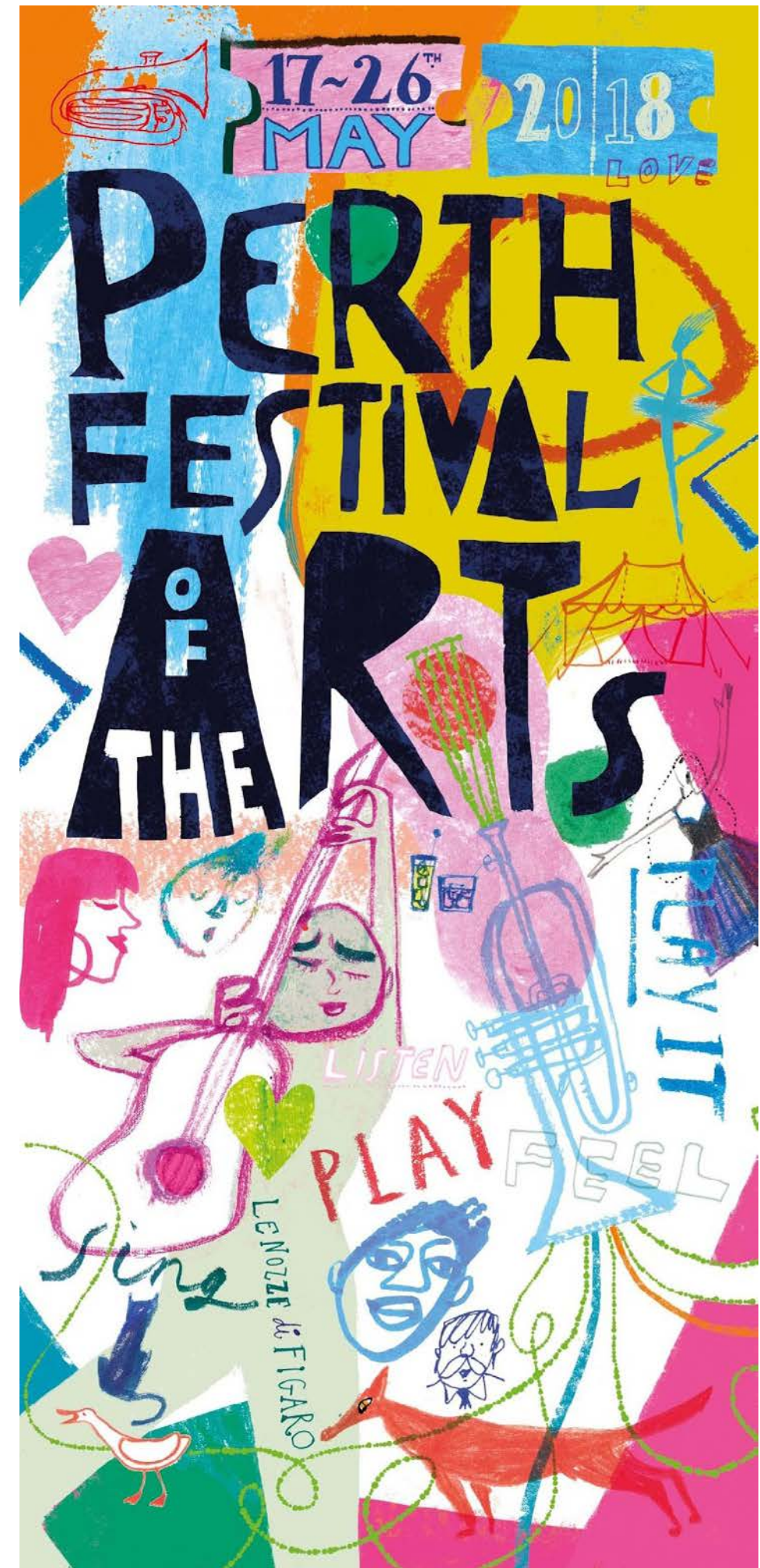


Fig. 13 Perth Festival of the Arts 2018 Poster

What if... Imagine if...

In the process of reassessing the education system it might be useful to use a technique practiced by Duncan Wardel and the Disney Company. This exercise is explained in further detail in the section *Enabling Innovation: Envisaging Possibility*. Carrying out this exercise explores some of the possibilities that could redefine schools around the globe. In order to solve the lack of imaginative teaching in schools it will involve the process of re-imagining the education system.

Rules	What if...	Imagine if...
<ul style="list-style-type: none">Remain in the classroom / fixed classrooms.Follow the outcomes set out by the curriculum.Standardised Testing.Loathsome tasks / classes.Wear a uniform.Get up early in the morning.1 teacher to 30 pupils.Produce rather than imagine.Regurgitate rather than understand.Rigid subjects	<p>What if you didn't have to remain in the classroom?</p> <p>What if the curriculum wasn't determined by policy and government?</p> <p>What if there were no standardised tests?</p> <p><i>"There is an increasing view that big data is with us to stay, so how do we harness it in different ways? Why does it always become the instrument of the big guys? why can't it become the driver for big society?"</i></p> <p>(Kevin Campbell, 2018)</p>	<p>Imagine if for one day of the week teachers could come up with an activity at their own discretion that they believed to be engaging. Allowing the teacher to share a genuine personal interest and the children could walk between classroom and participate in whatever they wanted to or felt drawn to. Similar to an expo.</p> <p>Imagine if the curriculum was decentralised and instead determined by a board of teachers, students and parents with the guidance of professionals. Perhaps one day out of the week the children could determine what they learn and could ask any questions they want. This could allow for an engaging discussion with their teacher and if the teacher does not know the answer they could research and discover together. With the power of the internet this is perfectly achievable in minutes.</p> <p>Imagine if instead of standardised scores there was a database that could process and determine a child's abilities based on a body of tailored tests, assignments, level of engagement and interests. These results could be mapped out over their entire school life. With the power of machine learning and AI it is completely plausible. Google, Facebook, Apple, Uber can all build an accurate profile of an individual just through search history. Imagine the capabilities when feeding in reliable academic material.</p>

Introduction

The Massive Small movement is inherently linked with the development of creative innovative communities. 'Massive Small' actively encourages the development and empowerment of individuals to take control of their environment and lives. It also aims to bridge the gap between the 'top down' and 'bottom up' through effective frameworks and policies.

The Formal World Versus The Informal World

When addressing vernacular development and planning, instead of referring to the developed and developing world it could be referred to as a formal and informal condition as these typologies can be found across the globe, both North and South of the equator, in one form or another. UN Habitat highlights the value of informal development and that its DNA can be found in most major settlements.

"informal settlements are just cities in progress"

(John Turner, 1972)

Informal settlements have remained constant throughout human existence and will continue to remain present as a result of poverty, culture, population growth, migration, lack of infrastructure or governance.

"No matter how fast governments build, informal settlements grow at ten times the rate"

(Kevin Campbell, 2018)

They are borne out of human necessity and establish the basic principles found throughout the built environment. Their existence allows a glimpse into the past of most westernised settlements and can act as catalyst when addressing complex issues such as the housing crisis, gigantism and community isolation allowing society to re-evaluate the basic principles. The informal world holds certain qualities that could prove vital in solving these issues such as diversity, community, culture, resilience and its economic drivers.



Fig. 14 New York City



Fig. 15 Mumbai



Fig. 16 Guatamala City

Formal settlements have developed since the inception of cities with guidance from government and city planning. Ancient cities around the globe display characteristics of managed growth for example; planned infrastructure, grid layouts, material cohesion and scale. Many of these cities throughout history went through a transition period from informal to formal and so aspects of informality remain within their grain, especially in historical centres. Mass formal development or ‘modern development’ began in Europe around the 18th Century with the dawn of the industrial revolution and accelerated after World War II. Many slums were decanted and residents displaced with grids and social housing taking its place while historical centres were polished and displayed as relics of a bygone age. Both conditions were by-products of a vernacular typology often divided by an arbitrary district line which would go on to determine their perceived value.

Formality in modern planning is essential in providing a high quality of life on a societal scale. Social cohesion allows cities to function with tremendous efficiency and pursue sustainable objectives both economical, social and environmental. It can however strip places of their culture, diversity, individualism and scale and instead inspire conformity and totalitarianism.

Massive small aims to take the formal model and incorporate the many freedoms that can arise from informal development. It accomplishes this by shifting a portion of the power away from the state and giving it instead to the people. This results in a ‘bottom up’ approach to urban planning and construction.

“Top-down urban planning, design and delivery systems must evolve to offer a common platform with an equitable framework of choice (design options, procurement routes and entry levels to the system) for the individual, collective or institutional builder.”

(Kevin Campbell, 2018)



Fig. 17 Prague

	Western Europe	North America	South America	Asia	Africa
Stage	Early 18thc	Early 19c	Middle Mid 20c	Middle-Late Mid to late 20 and 21c	Late Late 20c to early 21st
Type/Source	Industrializa-tion immigration/ rural/urban migration	Industrializa-tion/ immigration/ rural/urban migration	Rural/urban migration	Rural/urban migration, Industrial, Natural Increase	Rural/urban migration, Natural Increase
Examples	London, Paris, Barcelona	New York, Chicago	Rio, Caracas	Mumbai, Karachi	Lagos, Nairobi
Amelioration	Clearance, Urban extension/regularization, Public housing, New Towns	Clearance, Public housing Rehab/vouchers	Upgrading	Upgrading	Upgrading
Documentation	Charles Booth, Charles Dickens (<i>Oliver Twist</i>)	Jacob Riis, Paul Kellog, Upton Sinclair (<i>The Jungle</i>)	Charles Abrams, Janice Perlman Paolo Lins (<i>City of God</i>)	United Nations, World Bank, Vikas Swarup (<i>Q&A</i>)	United Nations, World Bank, Chris Abani (<i>GraceLand</i>)

Fig. 18 UN Habitat, Table Documenting the Development of Slums

Defining the Complex and the Complicated

There are key differences between complicated systems and complex systems. Complicated systems exhibit a quantitative, analytical characteristic often following a list of fixed factors which are comprehensible and can be mapped and evaluated.

Complex systems have a qualitative nature sometimes appearing simple or abstract as concepts accommodate unknown variables. There are aspects that are intangible or too large to comprehend in their entirety, so projections must be drawn. Complexity resides within the realm of uncertainty, it can however be managed through a flexible framework which welcomes ambiguity and diversity.

An example of a complicated system could be an interchange. It is constructed through holistic research and expert engineering. The project is understood in its entirety with engineers and construction workers having addressed every aspect of the design. It is absent of ambiguity as every element conforms to efficiency, stability, accessibility and cost. It is a product of form following function, informed by a comprehensive understanding.

Many examples of complex systems can be found in nature, in this case the process of pollination. The principle is simple yet the intricacies of the process are complex, for example where the pollinator will go next? To which flower? Will it be successful? How many will it pollinate? How many pollinators are there? What will the knock on effects be?



Fig. 19

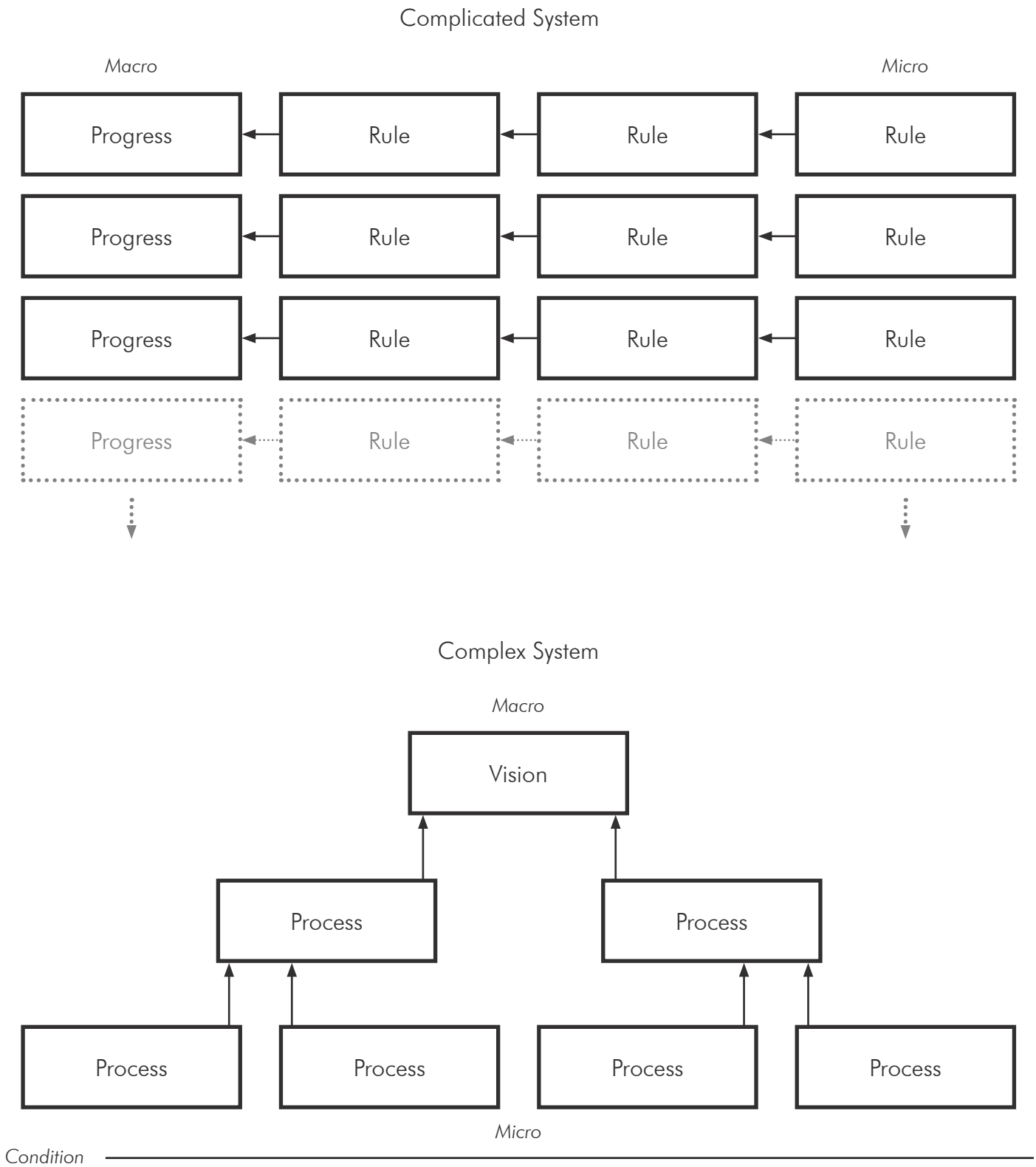


Fig. 20

Fig. 21

Not to mention the many variables which led to this process, such as evolution over millennia, as well as the unpredictable nature of organic organisms. It is impossible to determine the outcome of every process or hope to control it on the micro level. Many of the processes are inconsequential on their own but contribute to a larger whole, which can be influenced through an informed framework. The framework must consider the past, present and future, utilizing appropriate statistical data, knowledge and site specific studies. These factors can be measured through diagnostic tools and samples which project a theoretical model, the holistic concept can then be understood through this data. Once this framework is achieved, principle aspects can be manipulated for example the number of flowers, the species, the pollinators... These factors will then reverberate through the ecosystem shifting it in a desired direction. It is not the manipulation of individual processes but instead the manipulation of the condition.

It is important to determine whether a system should be viewed as complex or complicated. In some cases a complicated system is branded as complex, resulting in little oversight and used as an excuse to discount perceivably impossible tasks. In other cases complex systems are branded as complicated problems that can be solved through rigid interventions, with an attitude of command and control leading to totalitarianism and suppression.



Ideas, Tools and Tactics

Kevin Campbell addresses the three key forces acting on urban change, purpose, intelligence (truth) and power. Purpose refers to the driving forces behind the project and the aims of the shared vision. Purpose is essentially the goals and objectives of the strategy, as well as the wider universal objectives of viability and resilience. This can include questions such as who does the project serve? What is the scale of the project? Is the project modest or is it a statement? Is it innovative or iterative? Charles Landry also highlights the importance of setting out goals and objectives when tackling a creative neighbourhood, arguing that it is vital to understand the neighbourhoods purpose and identity before implementing a strategy.

Intelligence refers to knowledge and professional insight as well as challenging preconceptions. It requires informed judgment as to whether the project demands reinvention of the wheel or simply taking advantage of pre-existing systems. It also questions methods and ideologies. Intelligence can be described as laying out the techniques and evaluating the approach. In a way, it sums up the ideas, tools and tactics portion of 'making massive small change'.

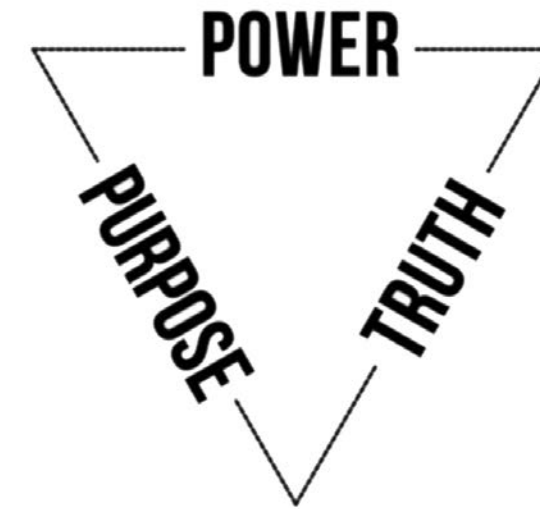


Fig. 22

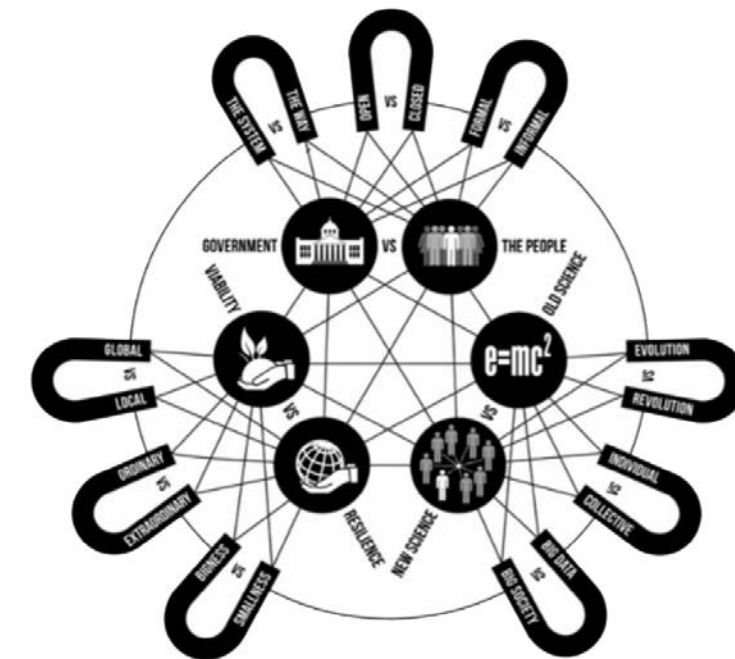


Fig. 23

Power takes the form of a spectrum, at one end sits the notion of ‘top down’, at the other lays the approach of ‘bottom up’. Power often resides somewhere in between, with forces pulling on both ends. In developed countries this bar tends to reside within the realm of ‘top down’ through stricter polices, social norms and monetary drivers. In developing countries society often takes the approach of ‘bottom up’ out of necessity, failing governance, lack of funding or as a result of culture and acquired skill sets. Of course this model varies globally however it is most visible when comparing the developed world and the undeveloped. The formal and the informal.

Massive small aims to bridge the gap between ‘top down’ and ‘bottom up’. Arguing for a cohesive system which takes advantage of the positive aspects of both. This is accomplished through policy and leadership which inspires and enables grassroots development rather than hindering ambition. It can be argued that professionals across multiple sectors are required to accomplish this task, through knowledge, guidance and transparency leading to a ‘middle out’ system.

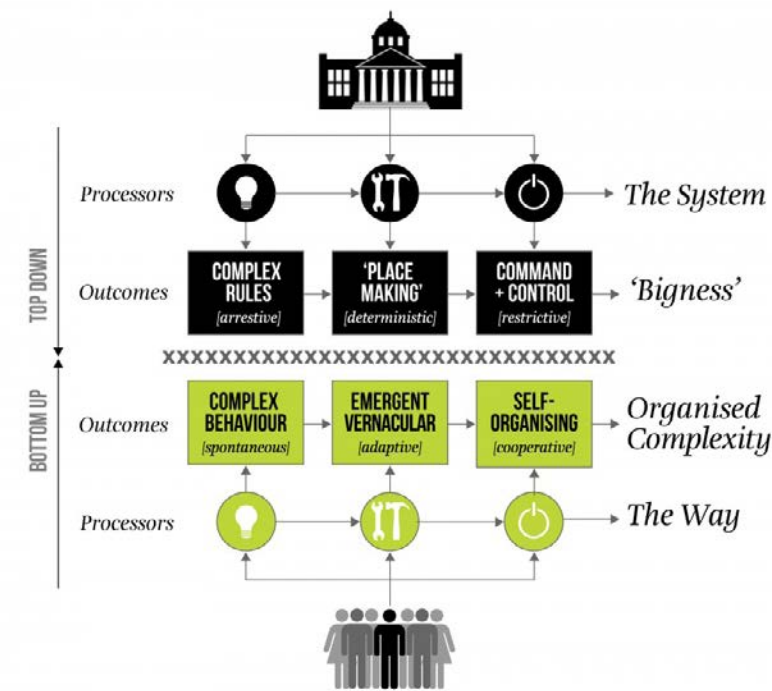


Fig. 24 Division Between ‘Top Down’ and ‘Bottom up’

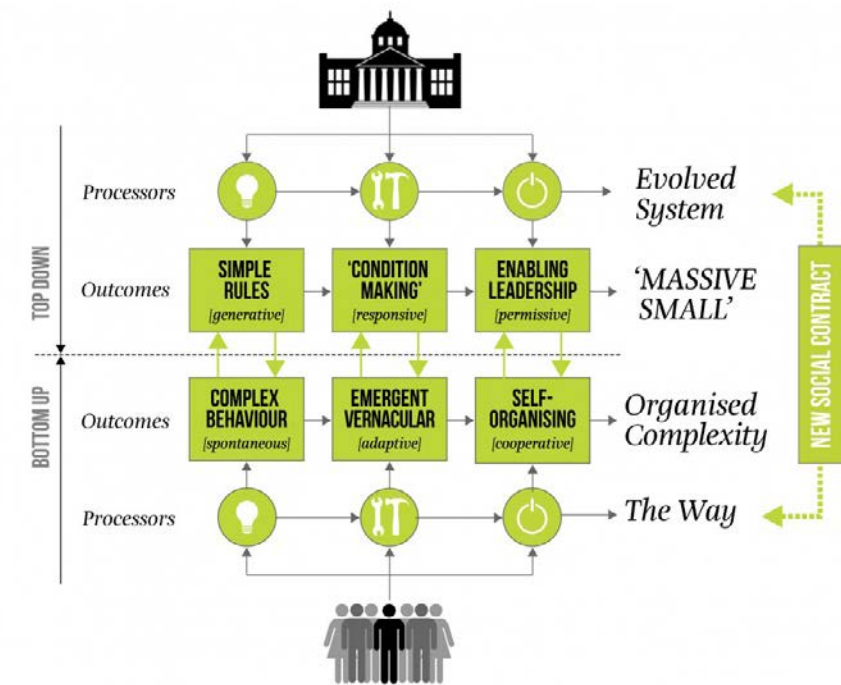


Fig. 25 Collaboration Between ‘Top Down’ and ‘Bottom up’

Massive Small Cities

There are several exemplar cities highlighted within 'making massive small change' which succeed in implementing effective strategies.

Berlin, Germany (*Self-made City*)

Berlin's townhouse project poses a unique condition in which the project inhabits a portion of the void left behind by the Berlin wall. In contrast to the conformity that wall once inspired, grows a community built on diversity. The site was divided into 12 plots allowing buyers to purchase the land and design the terraced houses however they saw fit provided they followed the basic frame work which determined scale and positioning. The neighbourhood has since attracted artists and creatives, in keeping with the character of Berlin.

Curitiba, Brazil (*Urban Acupuncture*)

Granular development is not only from the 'bottom up' but can come from the 'top down'. Curitiba is a successful example of this style of governance. Through a series of minor interventions it has resulted in major change. This was accomplished by a proactive government and the steady development of trust between the community and the city leaders.

"one of the merchants who wrote the petition to stop the work told me: 'Keep this petition as a souvenir, because now we want the whole street, the whole sector pedestrianised!'"

(Jaime Lerner, City Mayor, 2016)

Hamilton, Canada (*#coolittlethings*)

Hamilton is another example of granular top down development. It is a city which pays attention to its community's needs in particular, artists as the city reinvents itself following the downfall of manufacturing. The city successfully harnesses the power of social media remaining in contact with its citizens and informing the community of any major or minor changes offering transparency and support.

"Sometimes it's the little things, the pilot projects and experiments that have the biggest city-building impact."

(Jason Thorne, 2017)

The city manages to implement changes, interventions and policy at impressive speeds through consolidation and collaboration between government departments. This level of cohesion helps simplify the development process and eliminate much of the bureaucracy.

"Thorne oversees not only urban planning, but also transportation planning, economic development, and arts and culture."

(Curbed, 2018)



Fig. 26 Berlin Terracehouses



Fig. 27 Curitiba

The Network (massivesmall.com)

In line with the ‘bottom up’ manifesto of massive small, Kevin Campbell recognised that if the book was to be produced from a single perspective then it would contradict the very topic that it aims to address. Considering this the team developed a website which would act as a depositary for articles and to allow the information to be curated and integrated into the publication as well as acting as a network for research and collaboration. A website can act as a powerful tool for collating open source information and coordination. These benefits could be applied to a creative community acting as the catalyst for a grassroots movement.



Fig. 28 massivemall.com

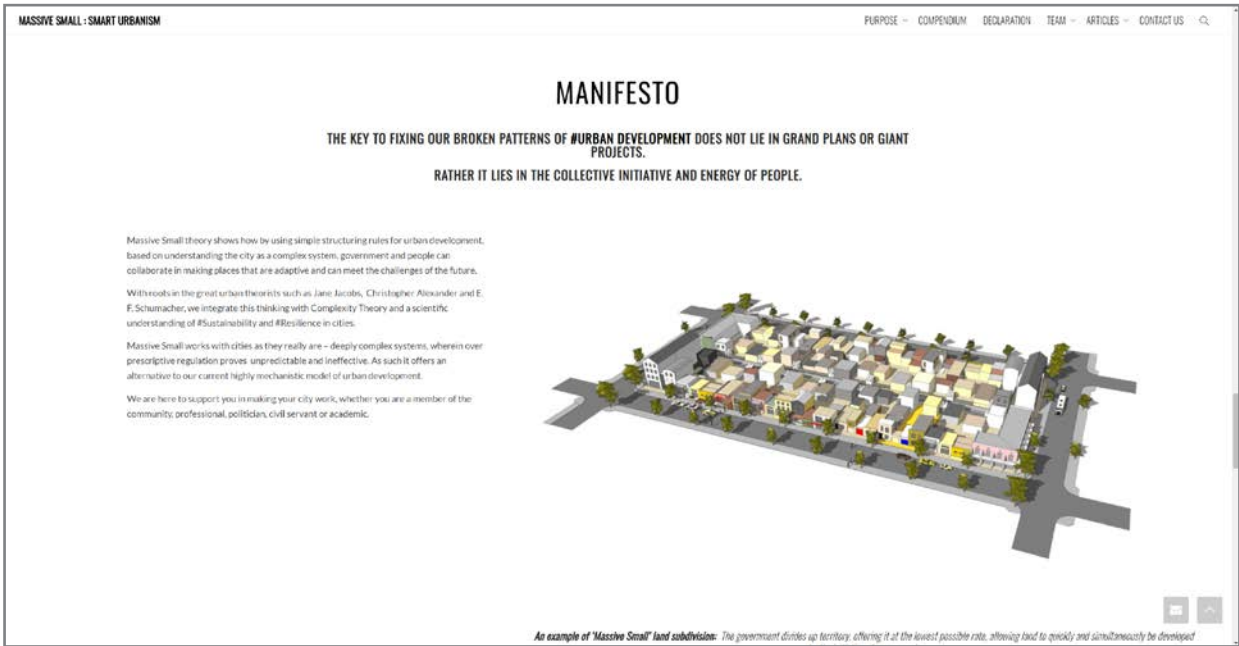


Fig. 29 massivemall.com

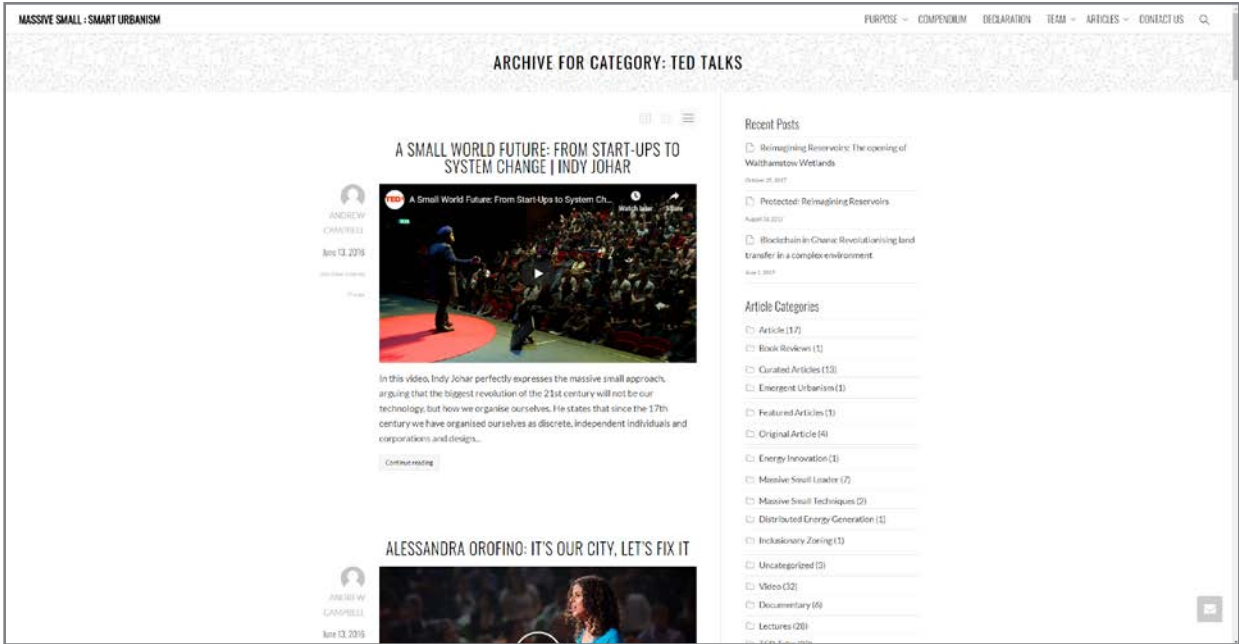


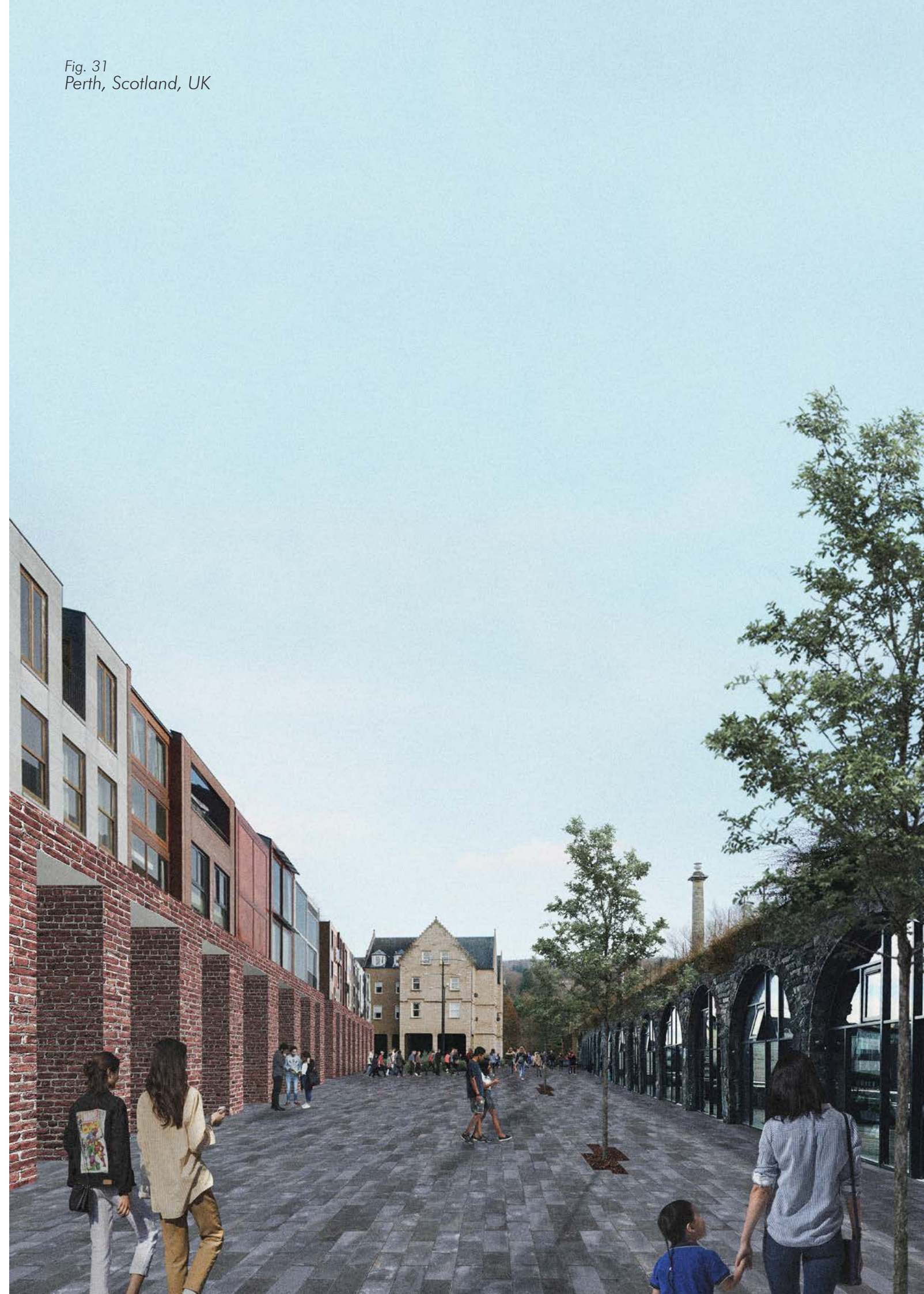
Fig. 30 massivemall.com

Enabling Creativity

Creative communities are dependent on critical mass as the industry is built on a co-evolutionary model which relies on individuals subsidising one another through community engagement, collaboration and shared brand presence. Art work is an example of the challenges the creative industry has faced when migrating online. It has failed to effectively migrate for three key reasons. The first is that technology has not reached a point where art work can be effectively advertised online, capturing the intricacies of unique items. Second is the valued experience when visiting a brick and mortar store, and third is the sheer competition online with both mass production items as well as traditional competitors, the greatest challenge is developing a brand which stands out from the crowd. Independent apparel stores, craftsmen and jewellers all face a similar reality.

The aim of Perth Creative Commons is to develop a district which at first revitalises the lower East side of Perth but also contributes to the city and inspires the region. The district will be built on the principals of enabling and inspiring the aspirations of individuals, and harnessing that energy to generate growth. The process will be vision driven with an established frame work. However both the journey and destination will be as flexible as possible while remaining in the realm of reality

Fig. 31
Perth, Scotland, UK



Engaging with 'Collaborators'

Duncan Wardle was the former Head of Innovation and Creativity at Walt Disney. He now runs an innovation and creativity consultancy company, which gives talks on the importance of integrating imagination into the workplace and society. He was also awarded an honorary doctorate by Edinburgh University.

Wardle addresses several effective techniques which inspire creativity, innovation and engagement. One of these techniques is 're-framing' which can be used to effectively engage individuals and inspire enthusiasm, pride and determination. Disney employees are an effective example of this. Instead of referring to them as 'employees' they are referred to as 'cast members'. By simply re-phrasing their job title it inspires a powerful shift in identity. Employee implies a notion of conformity, that they are disposable and conduct menial tasks. Cast member suggests artistry, creativity, talent, individualism, pride and that they are indispensable and valued by the company.

This same principle can be applied to Perth Creative Commons. Instead of referring to members of the community as 'citizens' they can be re-framed as 'collaborators'. The term citizen immediately breeds conflict, dividing community from governance and creating a 'bottom up', 'top down' scenario. Collaborator signifies unity and immediately inspires ownership and responsibility. It is a term which treats individuals as equals and inspires progress and team work between the community, professionals and government leaders. A community of 100 collaborators sounds far more effective than a community of a 100 citizens.

Fig. 32
Perth, Scotland, UK



Envisaging Possibility

Re-framing can also be used to re-evaluate the possibilities of a particular design challenge, for example, Perth Creative Commons will pedestrianise several streets creating a new condition. Instead of presenting this challenge to the design team and community as a ‘pedestrianised street’, which would result in iterative preconceived ideas for inhabiting the space, such as cycle lanes and planting. It could be re-framed as an ‘Urban Garden / Canvas’. This could lead to ideas which include furniture, community dining, festivals, art work, informal works space, an outdoor classroom, sports events, outdoor movie theatre... the possibilities are truly endless, simply by re-framing the condition.

Wardle goes on to discuss the importance of welcoming ‘naive experts’ into the process of creativity. This is often in the form of a professional that resides within a different field but could extend to any individual willing to engage in discussion. The job of the naive expert is to challenge the preconceptions of the design team and think outside the boundaries of the profession without embarrassment or the constraints of pride. They do not hold the same preconceptions of what can and cannot be, approaching the scenario as an outsider and often bringing the conversation back to the fundamental questions of what is possible, and if it is not possible, asking “why?”. This process is not only useful in engaging the community and understanding their point of view but also vital in the creative process acting as design refresher and sparking new possibilities and inspiration.

Wardle also introduces a technique which consists of writing all the rules related to a particular design challenge and then breaking several of those presumptions under the pretence of ‘what if...’ and then exploring the possibilities by posing the scenario ‘imagine if...’. This technique was reportedly developed by Walt Disney, leading to the inception of Disney Land Theme Parks. Walt Disney wanted to create an immersive experience in theatres for the movie Phantasia in 1940 which would incorporate effects such as mist and temperature changes. The theatres rejected the idea claiming that it would be too expensive to implement considering the movie would run for only a few months. Disney then carried out the following exercise which resulted in the Disney Theme Park model. The technique is a successful exercise in challenging preconceptions and envisioning possibility.

Rules	What if...	Imagine if...
Disney Example (Duncan Wardle, 2018)		
<i>Rules of a movie theatre</i> <ul style="list-style-type: none">It’s darkIt’s dirtySet timeI have to sit in a seatI have to watch the previewsI can’t control the environment	“What if I could control the environment?”	“Imagine if I took my movies out of the theatre... Well if I take them out of the theatre they can’t be two-dimensional anymore, they’ll need to be three-dimensional... If they’re three dimensional they’ll need somewhere to live... If they have somewhere to live we’ll need walk around characters... If we have walk around characters the princesses can’t live next to the pirates because people won’t be immersed in the story... I’ll need different lands... I know, I’ll call it Disneyland”
Perth Creative Commons		
<i>Rules of a traditional development</i> <ul style="list-style-type: none">It takes a lot of investmentIt takes a long timeLots of regulationsAverage people can’t afford itNo real communityLittle investment in social spaceRepetitive/ boring/ no diversityMonolithicFixed unit types	What if the units were not fixed?	Imagine if residents could design there own units. If they design their own units then the proposal will have to follow a granular model as each unit will be constructed at its own pace. If they construct their own units they will need a framework so that they can navigate the construction process. If there is a frame work then it will have to be developed in partnership with the community as a whole in order to remain democratic. If the strategy follows this process then its not only breaking one of the rules, its breaking most of them and is shifting from the monetised economy to the social economy. If residents are collaborating then it is collectively owned by members of society who are developing a life based on the commodity of creativity. Areas in a city that were collectively owned by society and provided a livelihood (grazing) were referred to as commons. I know, I’ll call it Perth Creative Commons

Exploring Precedents

It is vital to explore successful precedents which tackle similar issues and conditions. The following examples address granular development, modular construction, flexibility, adaptability and self build principles. All of the projects share a common characteristic, they engage individuals and inspire a community. From the Macro scale of cities to the micro scale of single apartments.

DGJ Architecture Collegium Academicum

The Collegium Academicum was developed by DGJ Architecture as a answer to affordable student housing. The project client is a collective of students who are financing the project through events and fund-raisers. The cost margins on the project are thin so an innovative solution was implemented. The bedrooms are limited by floor space regulations however as long as the minimum is offered, students can reduce the size of their own accord. This loop hole was integrated into the design creating a flexible layout which would allow students to sacrifice bedroom space to the communal area creating a larger social realm if relationships are formed between students. This innovative solution gives the students freedom and collective control over their environment whilst reducing construction cost and inspiring social cohesion within the apartments.

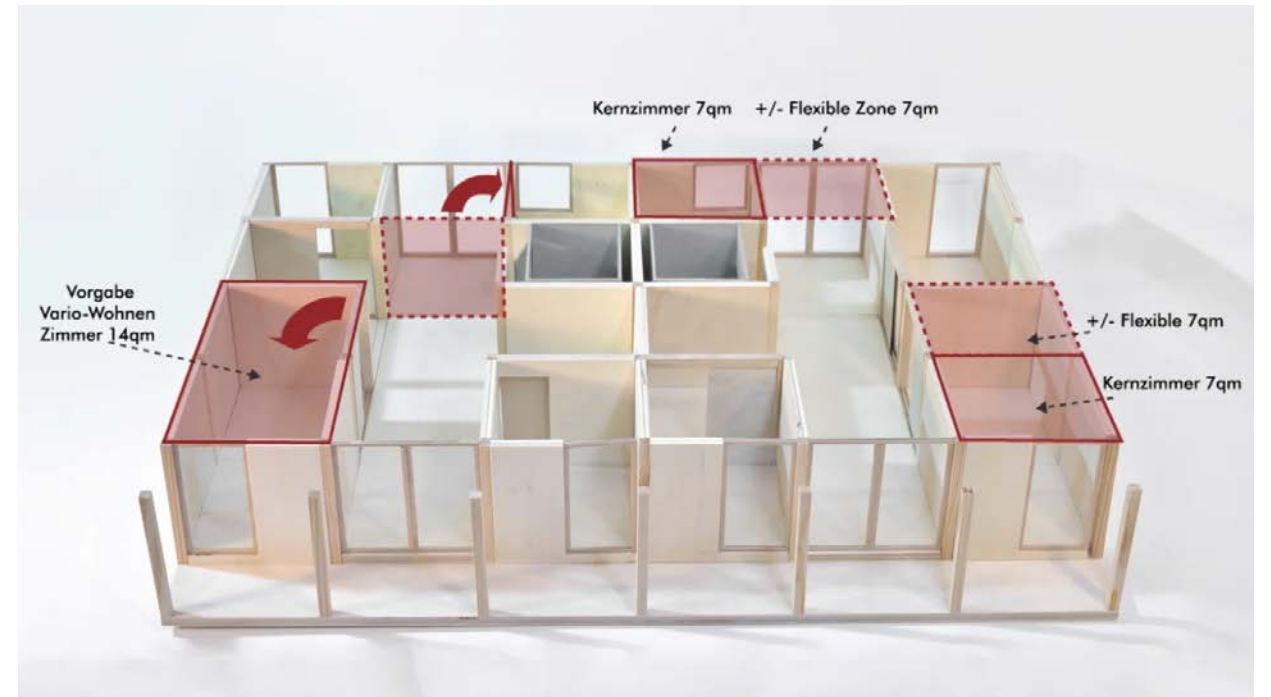


Fig. 33



Fig. 34

The Art Stable, Seattle by Tom Kundia

The Seattle Art Stable is designed for flexibility and adaptation. It does not predict the future but instead anticipates it, accommodating multiple outcomes. The building acts as a shell which allows for systematic conversion from office, commercial and gallery space into residential. It turns a fixed mixed use model into an adjustable spectrum which can respond to the property market and the needs of the community.

Fig. 35
The Art Stable,
Seattle



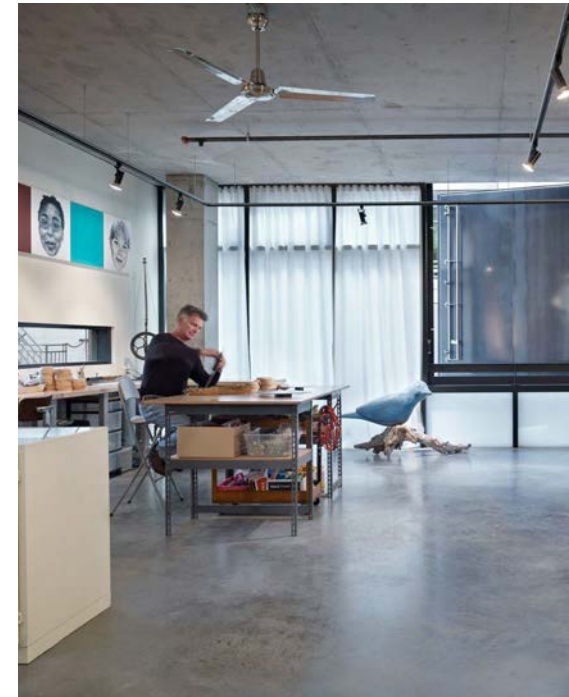
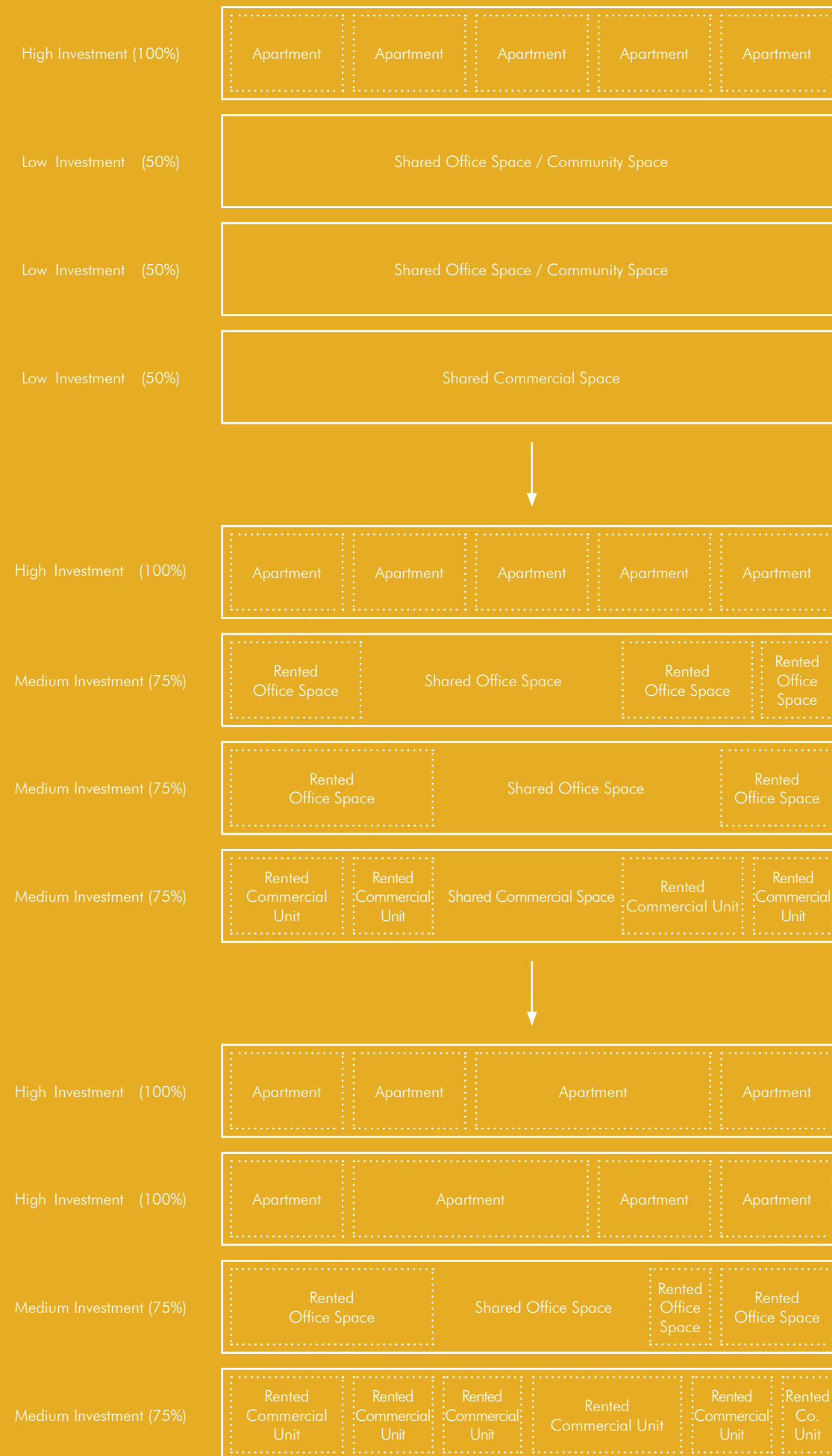


Fig. 36

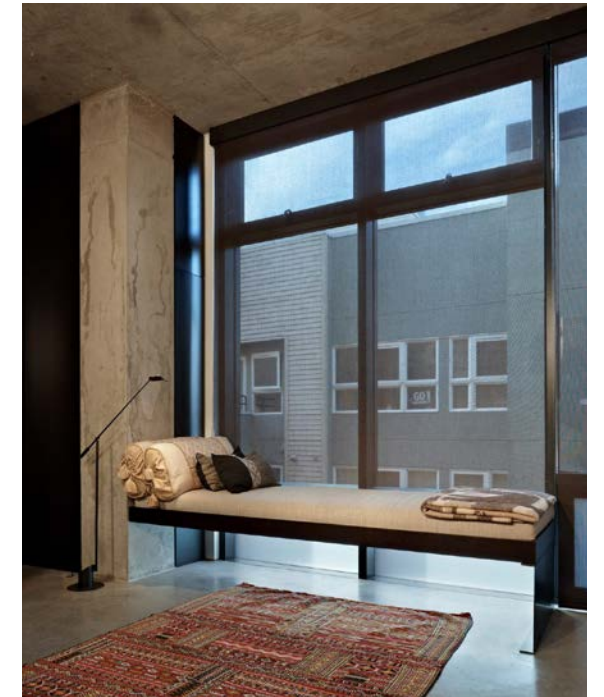


Fig. 37

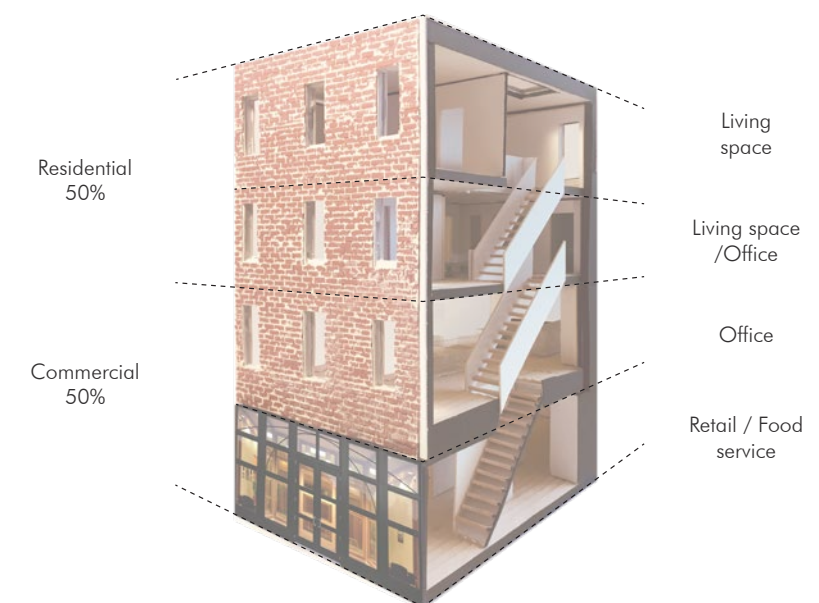


Fig. 38

Constitución, Chile by Alejandro
Aravena | Elemental

The challenge for Elemental was to design affordable housing and disaster relief units following the devastation of a major tsunami. The budget for the projects was stretched thin so the team decided instead of building one poor quality home for each family, they would build half a good home and allow residents to expand the unit on their own accord, following a loose framework which dealt with the most challenging concern of structural safety. Within that framework residents were given the freedom to personalise their property to their needs. This has led to a vibrant and diverse community which has taken ownership of their habitat. Elemental managed to turn a constraint into an opportunity, generating a creative condition.



Fig. 39



Fig. 40



Fig. 41

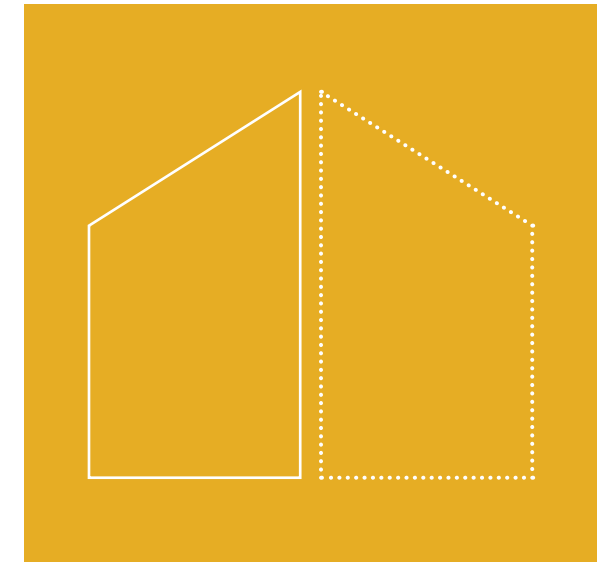


Fig. 42



Fig. 43

Favela Construction - Progress Over Time

Elemental took much of its inspiration from favelas and other informal construction in developing countries. As a result of the political, social and economical conditions in many developing countries, residents, often the poorest, have to learn the skills of constructing on their own without planning or infrastructure. They cannot rely on governmental aid and so out of necessity create informal vernacular communities. Even though many of these communities suffer from great hardship, crime and poverty they inspire diversity and creativity. Even in the harshest conditions communities can develop with little funding, instead relying entirely on ingenuity and creativity. Following a massive small model these communities develop gradually over time with many small additions contributing to a larger change. These informal settlements are a testament to human imagination and persistence as well as a glimpse in to the DNA of many major cities which developed in a similar manner.



Fig. 44

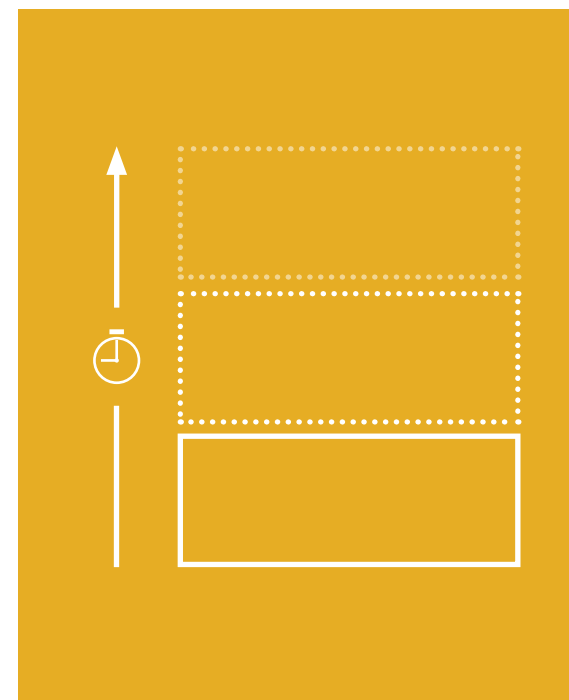


Fig. 45



Fig. 46

WikiHouse

There are now several examples of this method appearing in the developed world. WikiHouse is an open source community which follows a similar practice of self build. WikiHouse offers construction templates and schematics which can be downloaded from an open source platform. These drawings can then be altered or adjusted before being sent to a manufacturer which will often CNC or Laser cut the components. Each element is ergonomically designed for small teams to assemble essentially acting as a flat pack kit. The aim of the project is to serve the social economy as opposed to the monetary economy, designing for the 99% rather than the 1%.

“As a bottom-of-the-rung architecture graduate, I might expect to earn £24,000. I in terms of the whole world’s population, that already puts me in the top 1.95 richest people, which raises the question of, who is it i’m working for? The uncomfortable fact is that almost everything that we call architecture today is actually the business of designing for the richest one percent of the world’s population, and it always has been.”

(Alastair Parvin, 2013)



Fig. 47



Fig. 48

Naked House by OMMX

The naked house re-envision the adaptive / self build model developing on the ideas set out by Elements Chile Projects. However adjusting to the constraints of a developed country which follows stricter regulations and polices. The naked house starts life as a single volume with the ability of incorporating a second floor. In comparison to the other projects, the skill level needed in adapting the structure is reduced as the shell is already constructed. However, it does increase the cost for buyers and financial risk for investors. It also reduces the flexibility and architectural diversity. The project is well considered in relation to its context and securely grounded in reality.



Fig. 49



Fig. 50

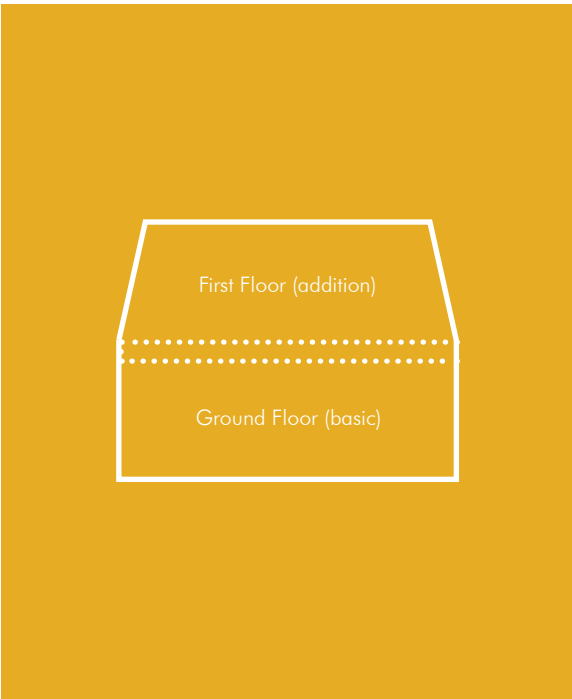


Fig. 51

Lianjie Wu - Bartlett Graduate

Lianjie Wu is a recent Bartlett graduate who has researched and adapted the naked house model, taking the concept to its most extreme. The project explores fascinating possibilities, integrating app technology which allows residents to shop on line for expansions to their home through an interactive catalogue. The project introduces modular construction allowing for mass production yet still retaining diversity and freedom. It is also built on a granular process similar to favelas creating an impression of informality yet still following an underlying framework.

Fig. 52
Lianjie Wu,
Modular Deisgn



Sigurd Larsen - Modular Village

The Modular Village by Sigurd Larsen literally builds on pre-existing conditions. The proposal is suggested as a solution for densifying Berlin. It utilises roof space on top of a pre existing residential tower encouraging the integration of existing communities and newcomers. The new urban corridor also offers amenities for existing residents, creating an urban park. It follows a similar expansion model as the previous precedents, however it combines old and new similar to the favelas, raising the topic of utilisation and adaptation over demolition and new construction.

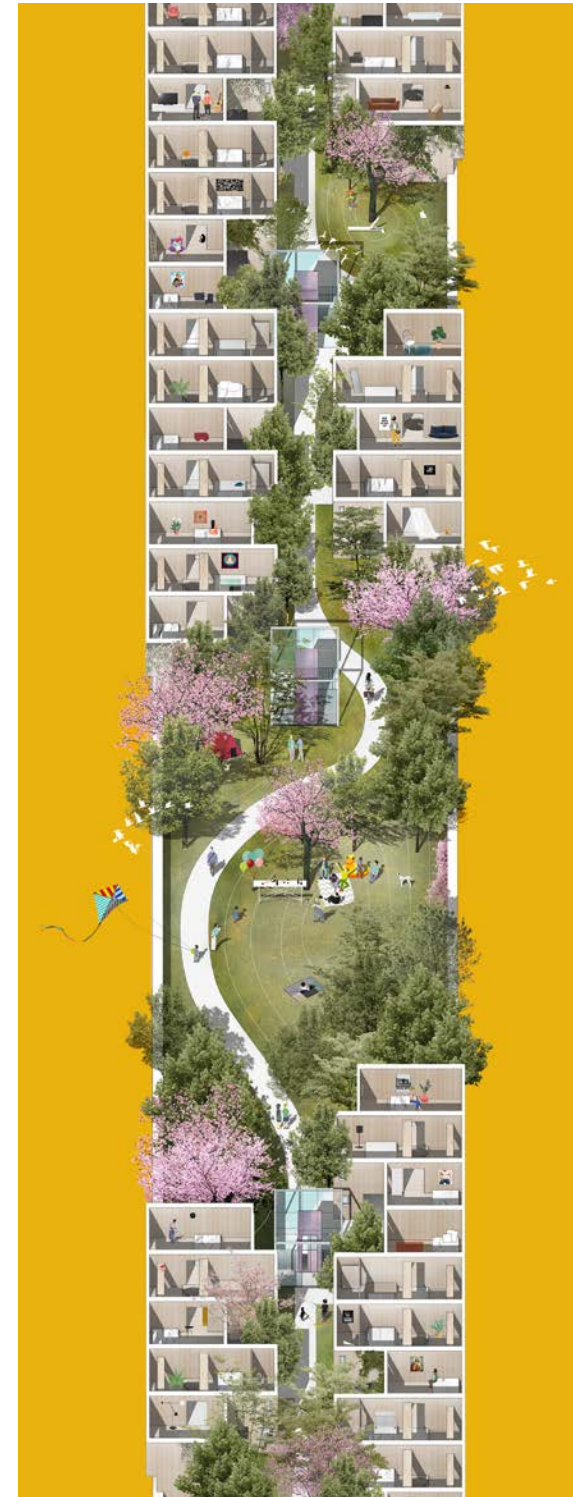


Fig. 53

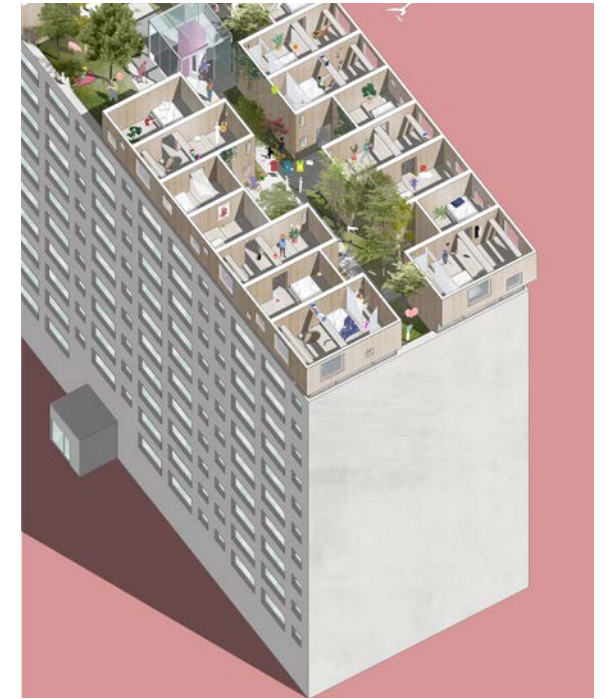


Fig. 54



Fig. 55

White Arkitekter - The Hedge

White Arkitekter's project 'The Hedge' also interacts with a pre existing residential complex and infrastructure. The building's mass creates a perimeter 'hedge' around the existing community and is constructed through a modular framework. The proposal aims to repair the urban fabric around many of London's residential estates, redefining the street edge and increasing the affordable housing stock.



Fig. 56



Fig. 57

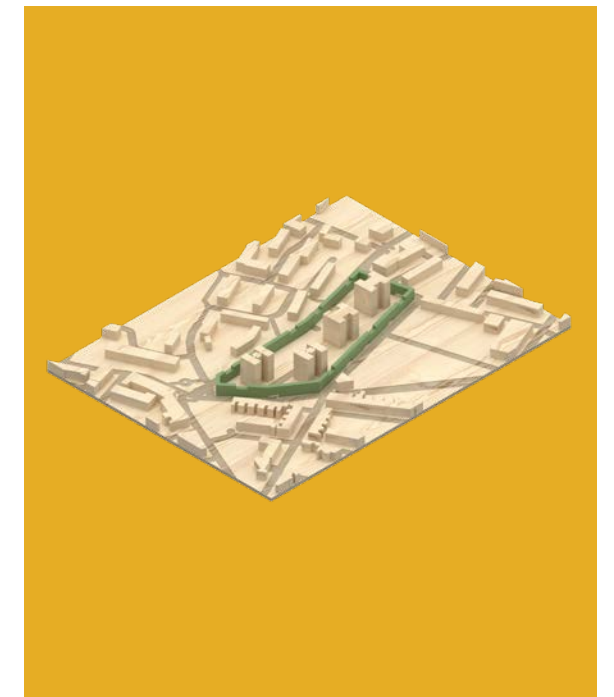


Fig. 58

Portsmouth Hot Walls / The Arches, Edinburgh

Both Portsmouth Hot Walls and The Edinburgh Arches are effective examples of redeveloping over looked infrastructure. This relates directly to the Perth Creative Commons as the site possesses similar railway arches that are uninhabited but would offer effective shelter and could be developed into quality retail units. This would be an essential early stage of development as they would be more economically viable than most new build structures. This would allow for steady growth and reduce the initial investment cost. The arches would serve as an incubator for the community, turning an unused product of infrastructure into a seed of opportunity.



Fig. 59 Portsmouth Hot Walls



Fig. 60 The Arches, Edinburgh

Establishing a framework

In order to enable creativity there needs to be a balance between freedom and guidance. This helps maintain a considerate and democratic community as well as providing a tried and tested formula which inspires confidence and simplifies the complex process of construction, especially for those that have little experience in the technical aspects of construction. It allows for both diversity and cohesion creating environments that function as well as inspire. The key is trust on both ends. Citizens have to demonstrate a level of confidence in their local government and government has to have faith in their citizens allowing them the freedom to experiment and offering them a right to build.

“Too often, people’s energy is obstructed by our ‘top-down’ systems. Most people can be trusted to do the right thing, but they are too rarely given a chance. The system works against them, stifling their initiative and knocking them back.”

(Kevin Campbell, 2018)

The framework should be informed by many of the traditional aspects of architectural design such as context, materiality, sustainability, utilities, social space, culture, transport, cost and regulation. In addition there are several key considerations specific to a self build model such as the construction skills of the community, level of complexity, collaboration and engagement, business strategy, growth, guidance from professionals and policy.

Examples in the Perth proposal include standardisation of certain components, utility zones rather than fixed cores which allow for flexibility, a pre-constructed plinth to offer initial stability and deal with the issue of laying multiple foundations, a limit of four stories so that it relates to its context, the implementation of BIDs in order to fund social development and maintenance of the district, Waste disposal and transportation and the development of the rail line creating a connection between the district and the central train station. This framework allows for flexibility whilst working towards a joint vision.

Fig. 61
Borneo Sporenburg,
Amsterdam, Netherlands



Engineering the tools

In order to develop a granular community which still remains cohesive there is not only a need for a physical framework but also a virtual one. Humanity has communicated and interacted through online platforms for the better part of a century, and now more than ever as a result of the 2019 Coronavirus pandemic. It has also been the basis for countless grassroots movements around the globe including recent protests and climate change awareness. It highlights the capabilities and possibilities of collaboration and handling of complex data online. The research, design and conditions of this moment in history have informed and inspired a strategy which takes advantage of the capabilities of an online platform. The platform will allow visitors to explore the community as well as branding Perth Creative Commons as a valuable destination. It will also work as a platform for collaboration and planning. Creating a digital playground to explore ideas, proposals, organising events and promoting members of the creative community. The community is granular and so develops over time highlighting a need for light oversight. This is expressed in a single architectural isometric which is consistently updated over time by a professional who remains in communication with the community offering transparency and guidance.

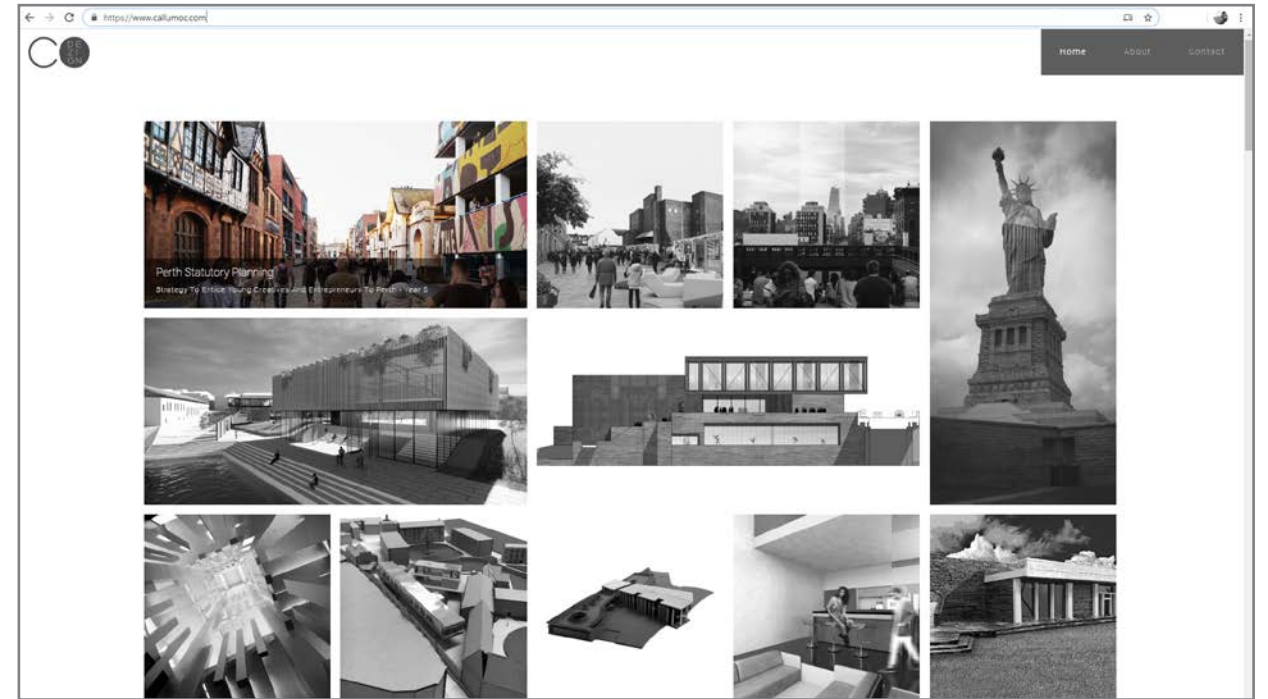


Fig. 62 Perth Creative Commons

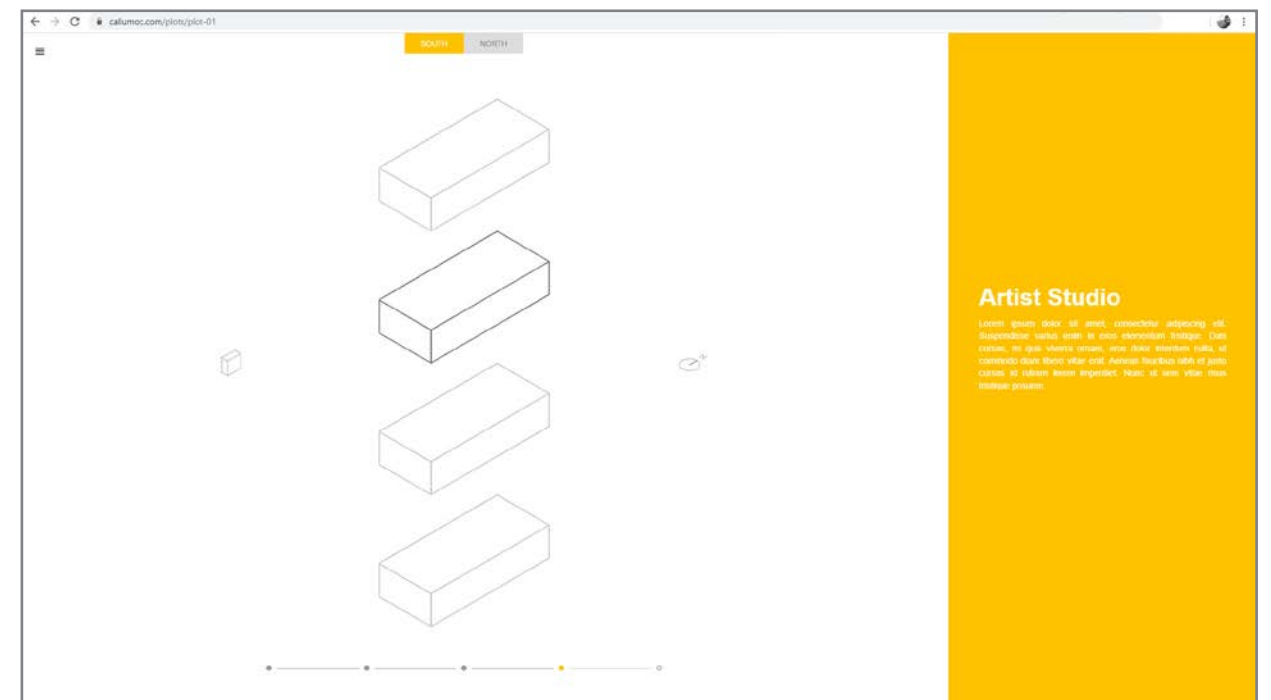


Fig. 63 Perth Creative Commons

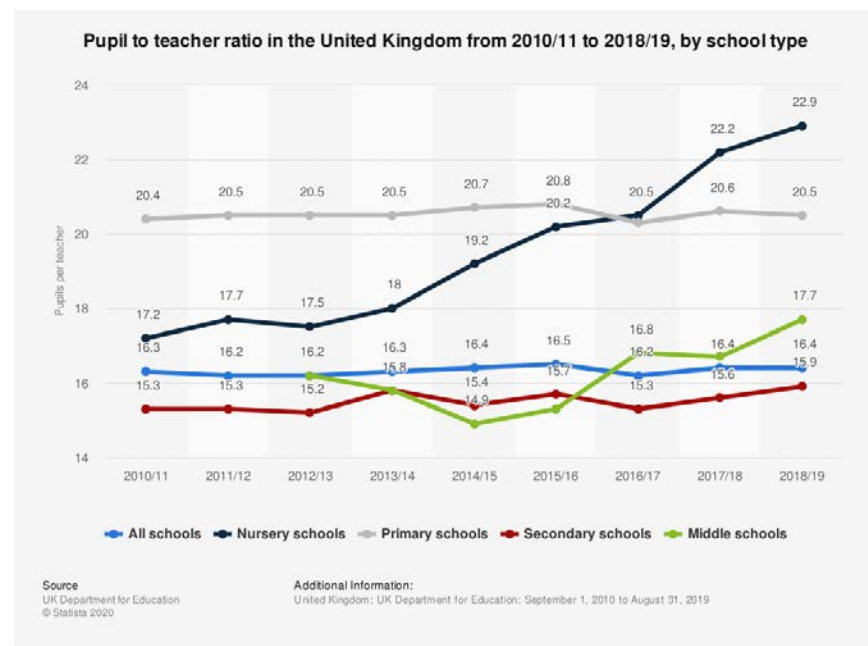


Fig. 64

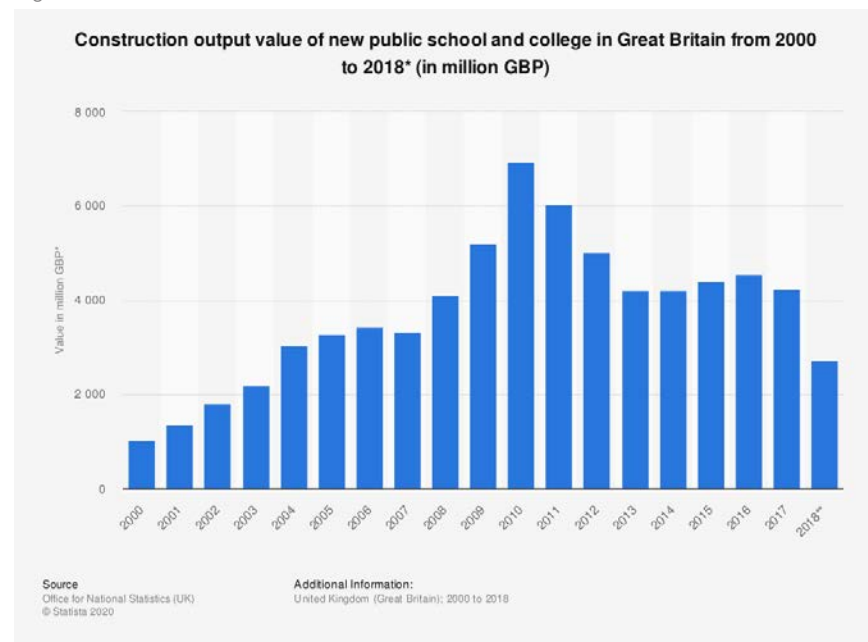


Fig. 65

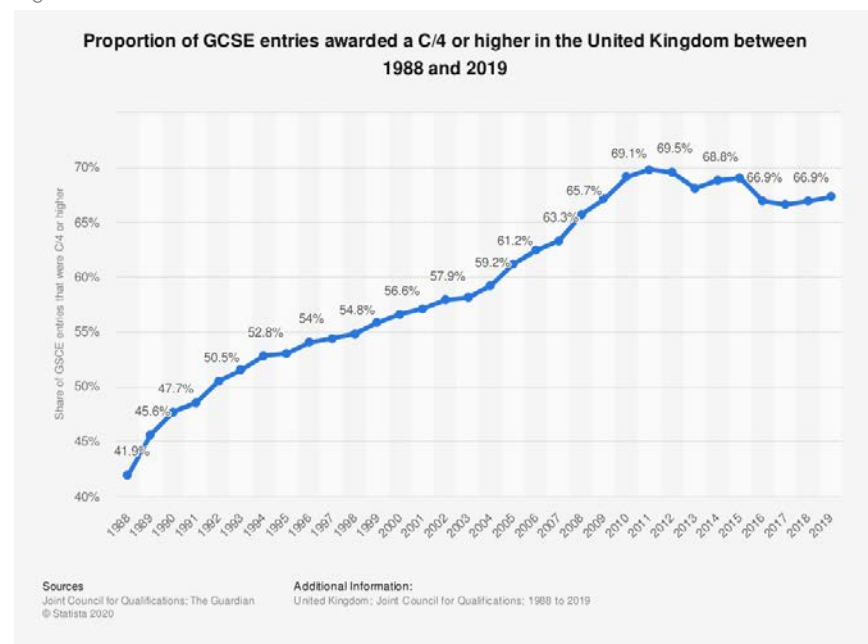


Fig. 66

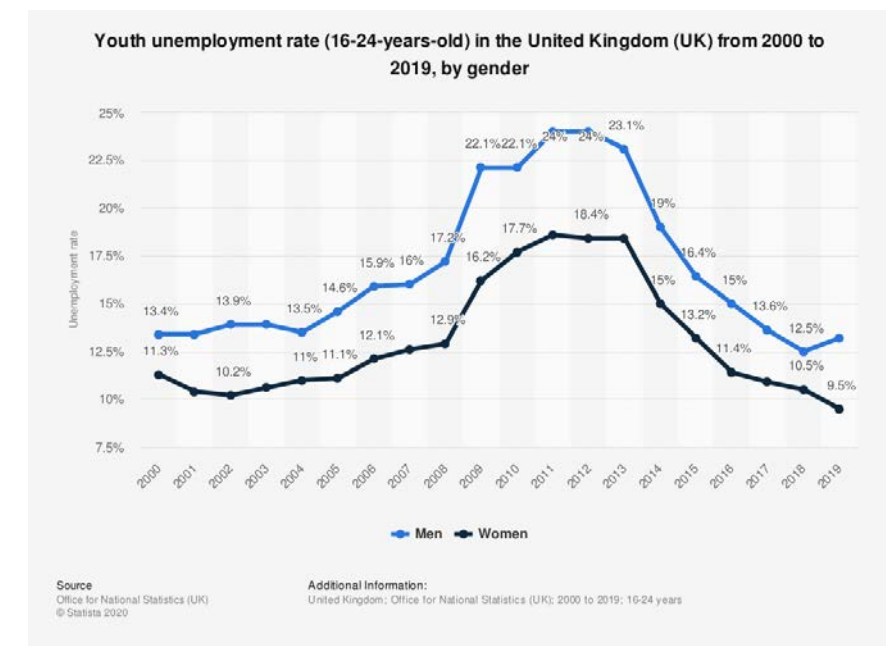


Fig. 67

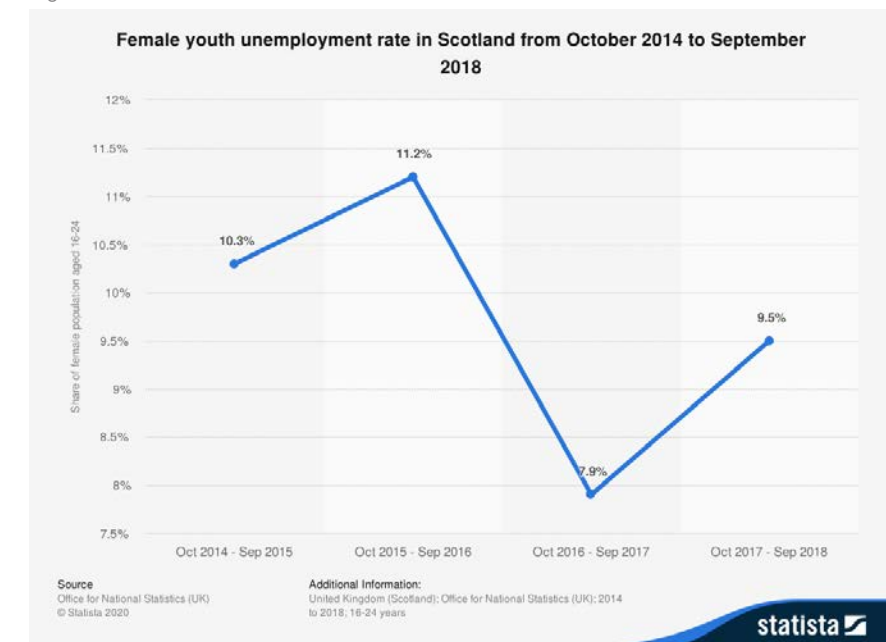


Fig. 68



Fig. 69

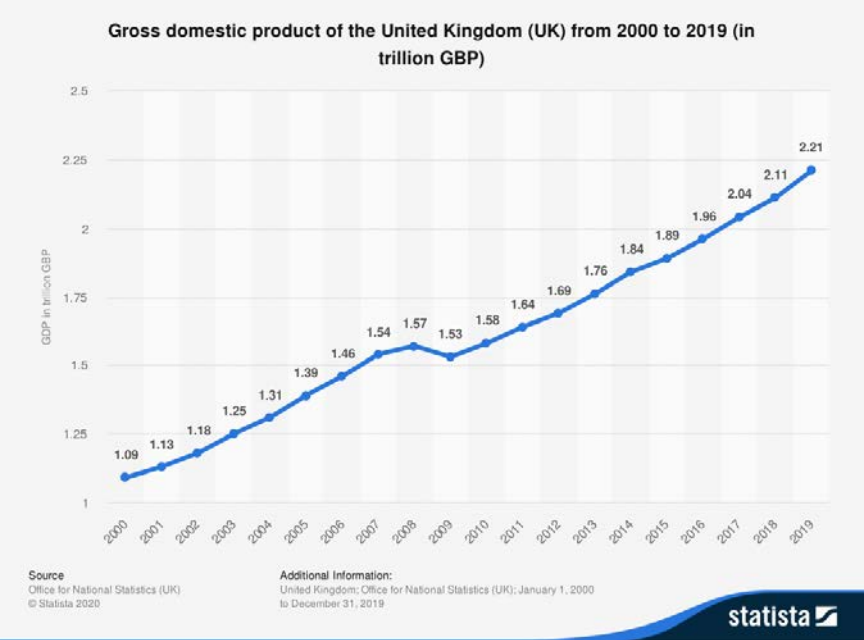


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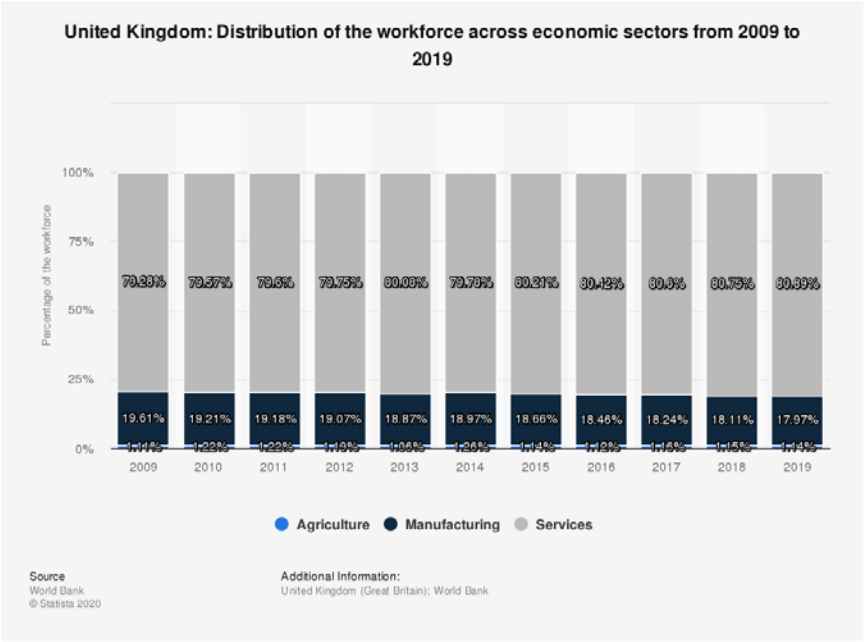


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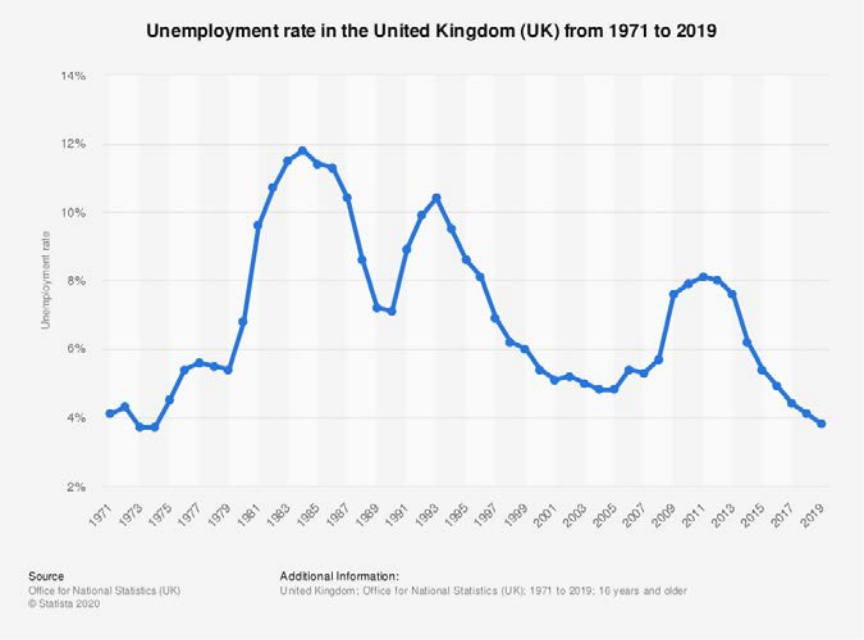


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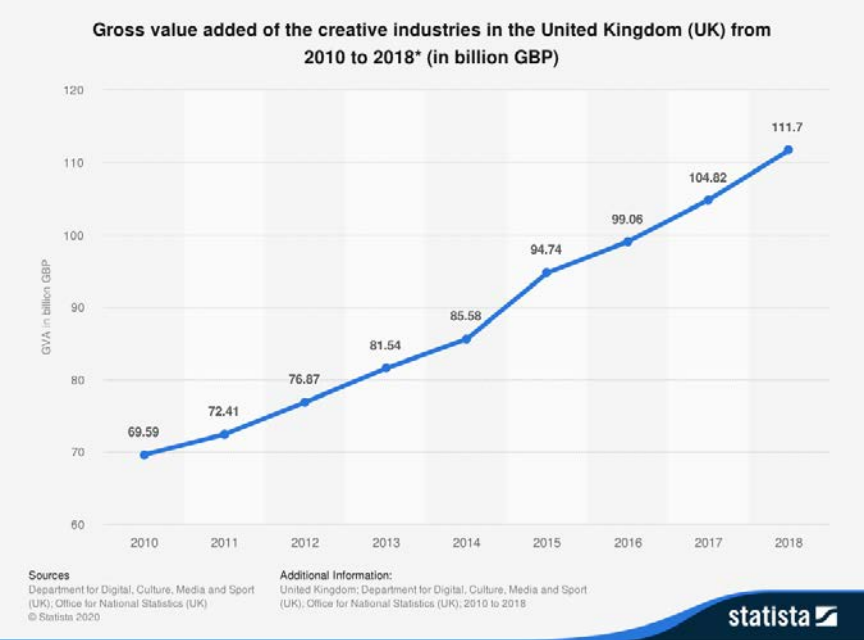


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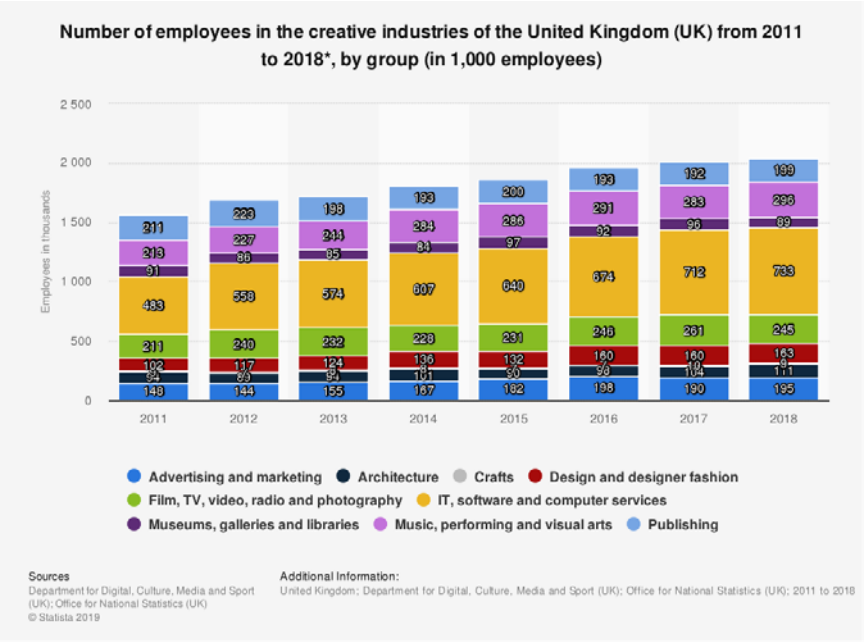


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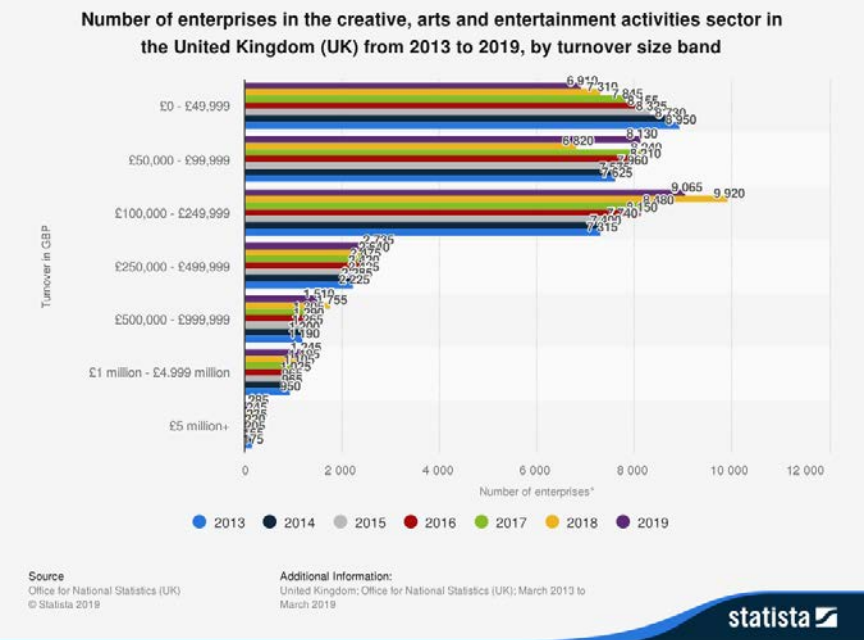


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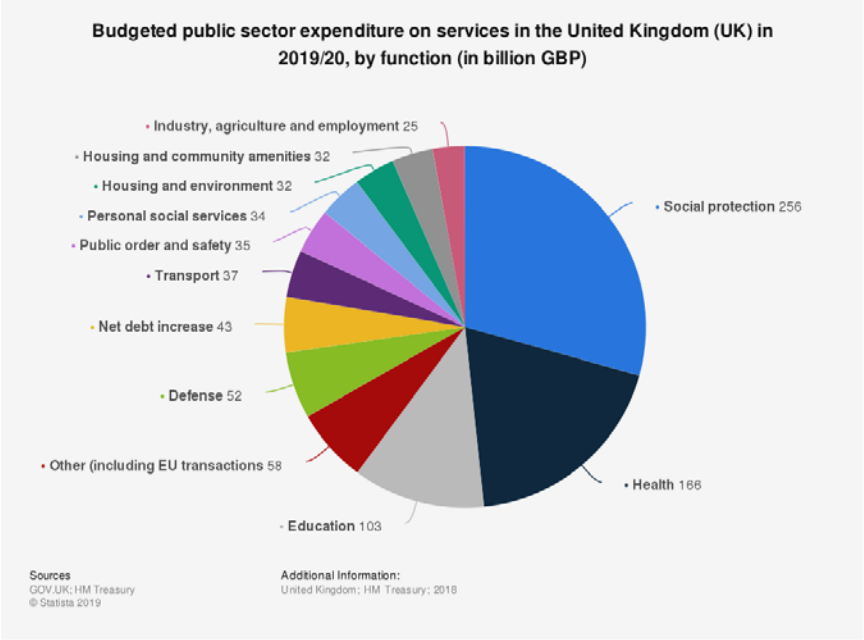


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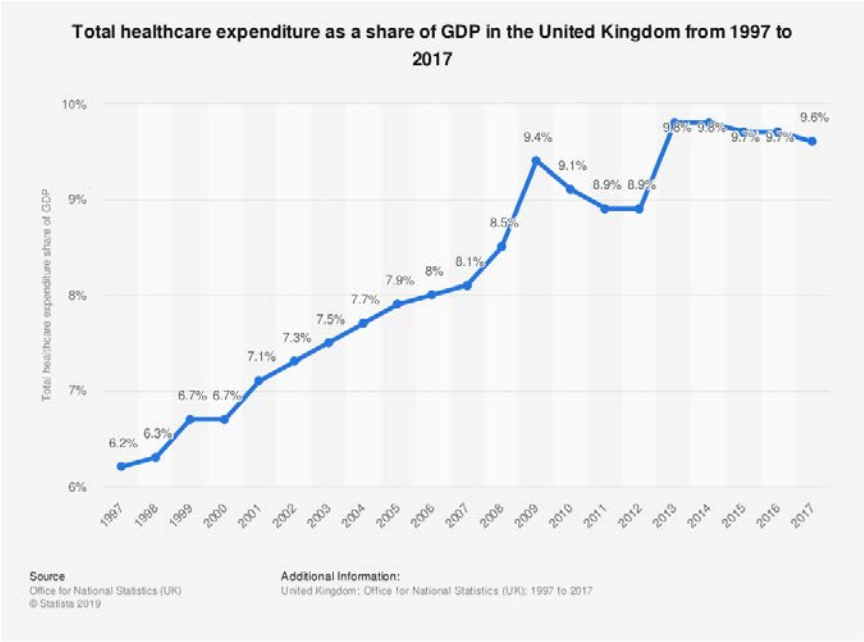


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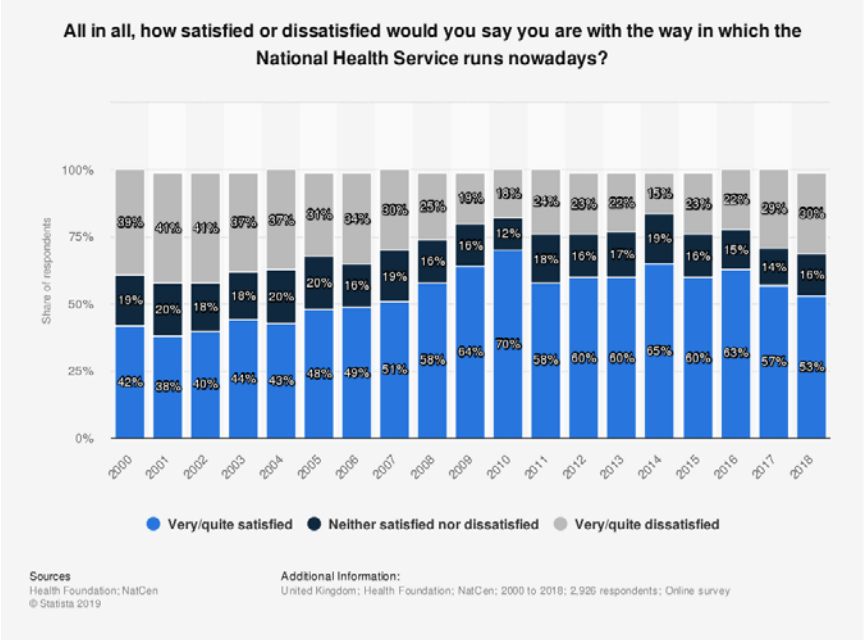


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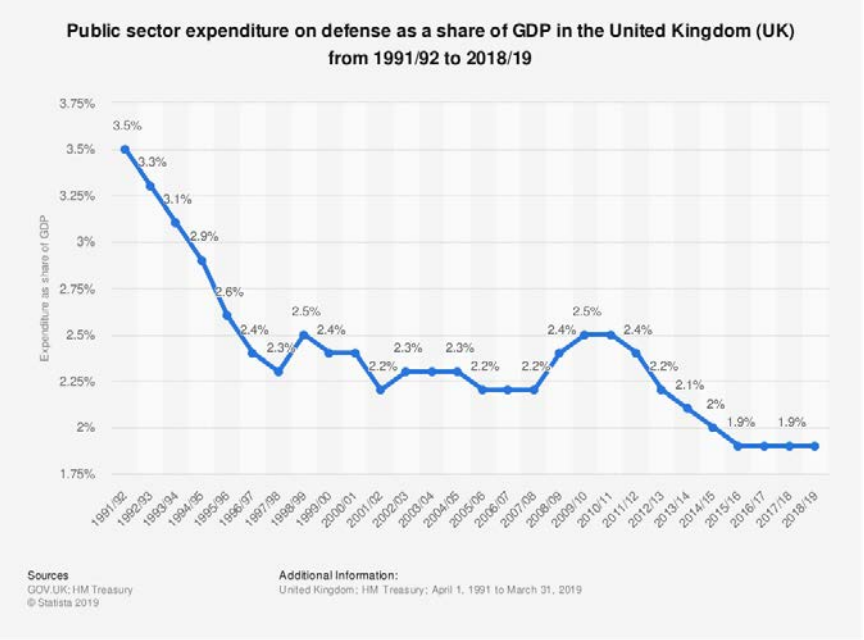


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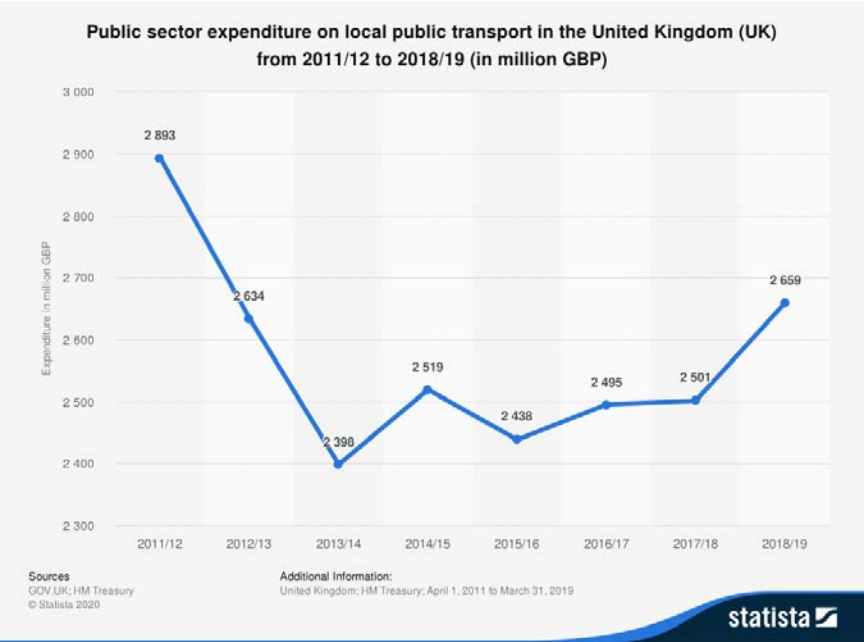


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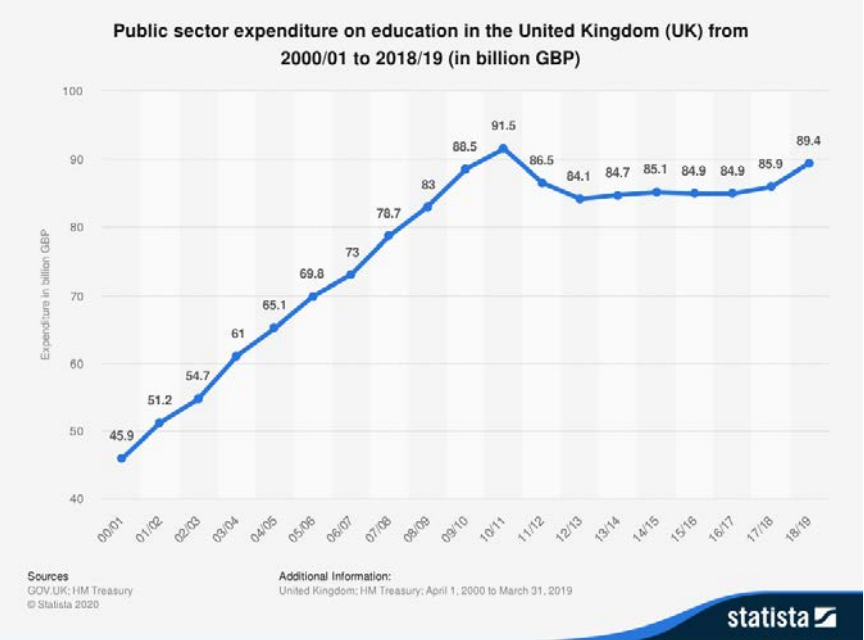


Fig. 81

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