

## **Design for Social and Environmental Enterprise**

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## Design for Social and Environmental Enterprise

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### Abstract

SEED Foundation undertakes action research to develop new, innovative ways for design to most effectively contribute towards sustainable development. The research that follows is not the result of academic investigations but rather, a culmination of 20 years direct professional involvement in the sector. By aligning current political goals with cutting edge design thinking and good business sense, this paper presents our ideas on how more designers can profitably solve social and environmental problems through their work.

It specifically investigates how the still emerging discipline of service design, in dealing more with relationships and experiences than material objects, offers inherent social and environmental benefits and is naturally transferable to sectors broader than private business –where designers traditionally work. By working in public and third sectors, and especially with social businesses, this paper uncovers new roles and business models for comprehensively sustainable design practice.

### Keywords

Design, Service design, sustainable development, social enterprise, social and environmental

Design is about people and solving problems. Products, services and systems that are well designed are easier to use, more visible, more desirable and more sustainable. Since the industrial revolution began, design has been used as a tool to meet specific economic challenges for businesses, to increase growth, improve market share and boost financial gain. The UK Design Council came into existence at the end of WW2 to help get Britain back on its feet by promoting the value British made goods. The 1946 exhibition 'Britain Can Make It' was created to show 'the improvement of design in the products of British industry' (Design Council 2007). This operation played an important part in driving post-war economic recovery and set the scene for the way the design profession would evolve.

But as the UK has shifted to a service-based economy, competitive advantage has moved away from product alone to incorporate brand and brand experience<sup>1</sup>. Businesses are now beginning to employ designers to

<sup>1</sup> Green communication group Better Thinking describe a history of consumption in which competitive advantage used to be based on product, then on brand. 'The next step' says the company's director Mike Betts 'is that businesses will be valued on

improve the quality of their service offering and the way they connect with their customers. Service design is a growing phenomenon, which looks closely at the way people do things, reframing problems accordingly to fulfil people's needs through new, easier and more desirable experiences. In this new guise, designers are helping businesses devise strategies for customer interaction rather than just being brought in to design more 'stuff'.

This ability to find attractive alternatives to physical objects has an added and largely unintended environmental benefit. Research on sustainable design identifies a shift to services as a potentially powerful tool for reducing the environmental impact of this industry. According to the sustainable design network, Sus-pro-net, "Companies should switch their focus to (offering) a mix of tangible products and intangible services, designed and combined to jointly fulfil a user's needs (Suspronet 2004)."

Businesses that sell products measure their success in turnover of units. A service model removes this dependency, but can be equally if not more successful. In 2001 Electrolux piloted a project to test this thinking with a group of consumers in Gotland, Sweden: instead of selling washing machines (product), they supplied the machine free. Each wash was then paid for through the electricity bill, an action that required building a new relationship between these two disparate types of stakeholders. The problem was redefined as one of fulfilling a user need – that of getting clean clothes (service). Over the lifetime of the machine, this model generates a higher turnover than just selling products. Since Electrolux would retain ownership of the machine, they would also have greater incentive to design it to be easily repaired and to last longer. In addition, the company would this way be involved in the end-of-life of the machine and can remanufacture it or recycle its materials (UNEP 2005). There is an added benefit in user behaviour change, since paying per wash will likely make customers wash less, with a consequent saving of water and washing powder.

The United Nations Environment Programme believes that the integrated working of stakeholders is a great advantage of service design, the real key to unlocking environmental benefits (UNEP 2005). Britain, with its strong service industry, has pioneering service designers, putting it in an excellent position to generate new sustainable service models.

So although all projects that pass through the offices of a service designer do not necessarily have an environmental objective, this might be a suitable destination for that growing group of designers who are concerned about the impact of their professional practice.

This more collaborative way of working requires new techniques and methodologies from designers. Service design, in focusing on relationships rather than things must employ strong visualisation skills to make the immaterial problems it works with, tangible. Through thorough mapping processes,

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their behaviour and will have to provide transparency in order to maintain customer loyalty.

designers can understand the links between stakeholders, the problems they share and identify the opportunities for design intervention.

Conducting ethnographic research and user-observation enables designers to thoroughly investigate and document user behaviour and their relationships with existing products and services. This information paves the way for understanding the gaps that exist in the current offering and how new or improved services might satisfy the need.

Service designers are exploring the value of the Internet as a means to successfully accessing services. London-based design studio LiveWork developed the systems and interfaces of Streetcar, a flexible car-hire service. Subscribers to Streetcar can rent a car on an hourly or daily basis, finding the nearest available car through a simple online tool. With the potential to be cheaper and less bothersome than car ownership, it affords people the mobility of a private vehicle, ultimately reducing the number of cars on the road. The importance of design in this model is making an interface that is so simple and intuitive to use that this different means of private transportation can be as attractive and easy as owning your own car.

## **Designing Beyond the Private Sector**

By designing for people's experiences, interactions and behaviour, designers are developing skills and techniques that are not only well suited to the services of business, but that are also easily transferable to public services. By applying their service design skills to the public sector, designers are able to broach a new set of challenges and opportunities, applying strategic innovation to problems of systems, infrastructures and relationships that are rarely demanded of them in the private sector.

In 2007, think-tank Demos published a report on public service reform – '*The collaborative state: how working together can transform public services*' (Demos 2007). Its fundamental message was that the continued improvement of public services depends on experimentation and collaboration from different parts of the public sector and the people they serve. Such thinking dovetails with emerging design approaches in service design that 'co-create' services through dynamic and participatory multi-stakeholder workshops, rapid iteration and prototyping. Such closely aligned thinking between the public sector and design industry, is perhaps a sign that both sides are ready to build new partnerships and broaden design's role in public life.

It is through this methodology that the former RED Unit at the UK Design Council was able to tackle a broad range of diverse problems relating to issues such as the prison service, domestic energy consumption and MP's relation to their constituents. A new generation of young designers is continuing this idea, experimenting with how they can support and improve public services. ThinkPublic, for example is using design to help the National Health Service build an emergency service that is better suited to the needs of today's young people. Zest Innovation is working with Northumbria University to help them with their recruitment strategies, exploring ways of promoting careers in design to school-age students.

Further examples of design's reach into new realms came through the Dott07 initiative, funded by the North East of England, where social and

environmental improvement was the key objective. Various projects explored how design can improve quality of life and wellbeing, involving local people in finding better and more sustainable solutions to their daily problems, such as how to get children in remote areas to school without dependency on a car (Move Me, Dott07 2007), or how to help low-income families cut carbon emissions through insulating their homes (Low Carb Lane, Dott07 2007).

The co-designed solutions that emerged were both innovative and unexpected: designers working with parents of children in remote schools came up with a spread sheet in the school entrance for more effective car sharing, as well as the re-design of the local bus timetables for easier use; the solution for people in low-income homes was a financial package, brokered between energy providers and banks, to enable insulating home improvements to be paid for through savings on fuel bills.

These projects illustrate that, when tackling the complex challenges of sustainable development, the designer can become a connector between multiple stakeholders, teasing out issues and finding common values. Here, where the re-design of systems and services become critical to making profound and lasting sustainable change, service design offers a number of valuable processes. Visual communication, mapping and user-centred design techniques make it possible to examine the journeys of different users through any given service, tapping into their needs, and understanding how their connected problems can turn into possible symbioses, reducing dependency on physical objects and finding new ways of effectively and enjoyably collaborating.

Recent research for the Design Council (Brass, Bowden & Moseley 2007) enabled us to overlay some of this burgeoning design thinking with some of the broader aims of the UK government's sustainable development strategy, *Securing the Future*, whose stated aims include the creation of "...sustainable communities that embody the principles of sustainable development at the local level. This will involve working to give communities more power and say in the decisions that affect them; and working in partnership at the right level to get things done." (Defra 2005, 17) We concluded that service design could make valuable contributions to these objectives, but it is still in its early stages. It exists predominantly in demonstration projects such as Dott07 or in academic research, whose operations are not conceived as businesses and therefore have no self-sufficiency, remaining inaccessible to mainstream design. In the face of the current environmental crisis, enabling designers to tackle the critical issues of behaviour, systems and infrastructure using the methodology described above, could have powerful results, but this will never be possible until it becomes a recognised path on which designers can forge their profession and their livelihoods.

Outside of design there is another area of business that is generating profit from social and environmental problems: social enterprises are profit-making businesses that trade in goods or services for a social or environmental purpose. Whereas conventional businesses distribute their profit among shareholders, in social enterprises the surplus goes towards one or more social aims of the business. Well known social enterprises include The Big Issue, Cafedirect and Welsh Water.

Three common characteristics of social enterprises as defined by Social Enterprise London are:

- Enterprise orientation: They are directly involved in producing goods or providing services to a market. They seek to be viable trading organisations, with an operating surplus.
- Social Aims: They have explicit social aims such as job creation, training or the provision of local services. They have ethical values including a commitment to local capacity building, and they are accountable to their members and the wider community for their social environmental and economic impact.
- Social ownership: They are autonomous organisations with governance and ownership structures based on participation by stakeholder groups (users or clients, local community groups etc.) or by trustees. Profits are distributed as profit sharing to stakeholders or used for the benefit of the community.

Design Council research (Design Index 2008), which followed share prices of a group of more than 150 companies recognised as effective users of design between 1994 and 2003, proved that design can boost the success of private business: they out-performed the stock market by 200 per cent. We believe that if this power of design were applied to social and environmental enterprises, it would propel them to a new level. We can see a potential for social enterprises to compete with regular business services while actually resolving one or more social or environmental issues in the process. Our premise is that problems are opportunities, and equipping the design sector to think more entrepreneurially and across disciplines would unleash design's benefits on a whole range of social and environmental problems.

We think there are two principle ways for designers to engage in this field: to support existing social enterprises, or to use their entrepreneurial skills to build new partnerships and social enterprises themselves.

A new model is needed to open the doors to the growing number of designers who wish to apply their skills and time to resolving social and environmental challenges, one which enables them to make money out of working towards these goals. Helping designers to be more entrepreneurial about their practice and develop new skills to design systems and services along with strong supporting business models, could turn them from perpetuators of social and environmental problems, into key contributors to solving them.

We believe sustainability should be as much about creating communities and jobs to enhance life as it is about environmental stewardship. To test our ideas and to develop methodology we will build a series of design-led social enterprises over the coming years. These will be based on a set of principles, on which we believe the design profession needs to focus:

### ***One: Infrastructure***

Up to now, where design thinking has been applied to environmental and social problems, it has tended to be in the realm of product design and around the familiar refrain 'reduce, reuse, recycle'.

Design's role in sustainable development must not be just about the objects themselves, but about what surrounds them. While looking at products and the way they are designed is important, doing so without considering the infrastructure that supports them and the behaviour of the people who use them is meaningless.

To many people, infrastructure is the most unfamiliar territory for design activity because it moves furthest from design's traditional role of creating objects. It seems rather to be the preserve of disciplines such as finance, politics or engineering. Designers are now challenging this, showing that their skills can be of enormous practical value. This is not a matter of supplanting other areas of expertise, but co-ordinating discussion between them, visualising problems and possibilities, prototyping solutions and putting the focus on end users to ensure real needs are met. It is about design navigating and managing complex networks of interdependent factors quickly and cheaply. It is also about design promoting adoption of new behaviour by making it desirable.

*'To bring the issues of sustainable consumption alive...people need to see symbolic effective solutions in their everyday lives. The effects of these interventions ripple outwards by opening people's minds to ways of doing things differently'*

(Sustainable Development Commission 2005, 109).

Most of the effects of our use of infrastructure are invisible to us. Research has shown that making the effects of people's actions visible can significantly change their behaviour (Abrams 2006). Design can filter and visualise this information, present it clearly and immediately and put it where it will be most relevant and visible.

Without thought for the systems that deliver an object to us, power it through its life and dispose of it when it is no longer useful, the environmental credentials of the materials and production processes are more or less nullified. Simply making material adjustments does nothing to alter the human behaviour that is really at the heart of the issue. This is the new space in which designers must learn to operate.

## ***Two: Interconnectivity***

It is not enough to deal with the problems of sustainable development at face value or in isolation. What we need are solutions that can visualise the context in its entirety and deal directly with the root of problems, ideally eliminating the risk of recurrence.

Sustainable development is a multi-layered, complex network of interrelated challenges and design solutions must approach it accordingly. Designers must appreciate this interconnectivity and tackle the problems holistically to avoid unwittingly shifting them elsewhere.

Plastic bags are the face of one such issue that has been much debated and tackled by designers, legislators and whole communities alike. Capping their free distribution or swapping plastic for more 'environmentally friendly' materials might create a new problem while worthily trying to solve the old one. The unforeseen consequence of taxing plastic bags in Ireland was a 300-

500% increase in the sale of plastic refuse bags and bin liners' (Carrier Bag Consortium). Through this we can understand that the problem of plastic bags is intrinsically linked to the problem of waste disposal at home – if the systems were in place to make it easier to correctly separate wet waste from dry, there would be no need to line the dustbin.

This kind of analysis also expands the realm of possible stakeholders (e.g. retailers, local waste and planning authorities, household goods manufacturers etc) to consider who else might contribute to the solution, leading us to the conclusion that emerging design disciplines must consider cross-disciplinary and cross-sector collaboration. The complex nature of sustainability means the different groups of society must be brought together in coordinated action in order to achieve accelerated change.

### ***Three: Business, government and people***

Each of these three sectors of society recognises that they need to change but UK Government research describes a gridlock of inaction between them, showing that they are unwilling to act in isolation (Sustainable Development Commission 2006). Each is wary of the other and each is reluctant to make a move without the assurance that the others will follow. Sustainable development issues clearly hinge on all these groups in numerous ways and it is this complex system of relationships that a product-design focused approach misses.

Advanced design thinking increasingly recognises the need to address relationships rather than deal with isolated objects. It examines the connections between things, the infrastructure that supports them and the people who use both. This will require implementing strategies and initiatives that touch the issues on many different levels. For projects to be successful they must work with all sectors together, to unlock the gridlock and facilitate change.

To return to the example of the supermarket plastic bag, its network of relationships takes in government waste targets, consumer behaviour beyond the shopping trip (since the bags are re-used), and the interests of a number of businesses. A creative design approach to the problem would co-ordinate the needs of all these groups to come up with really effective and, perhaps counter-intuitive solutions.

Sustainability is an overwhelmingly social problem and design's great strength in approaching it would be a focus on end users, whether from business, government, the general populace or all three. A user-centred approach engages all interest groups and encourages their active participation in the design process. For organisations of any sort whose primary objective is to engage communities, there can be few more effective methods of tackling the problem head-on.

### **Enterprise 1: HiRise Gardens**

HiRise Gardens is a social enterprise that touches on issues of biodegradable waste, homelessness, locally grown food, community cohesion and biodiversity. It offers local authorities a turnkey system to deal with biodegradable waste, using the skills of a particular group of unemployed



housing estate residents to manage a community composting system that will create a number of spin-off benefits.

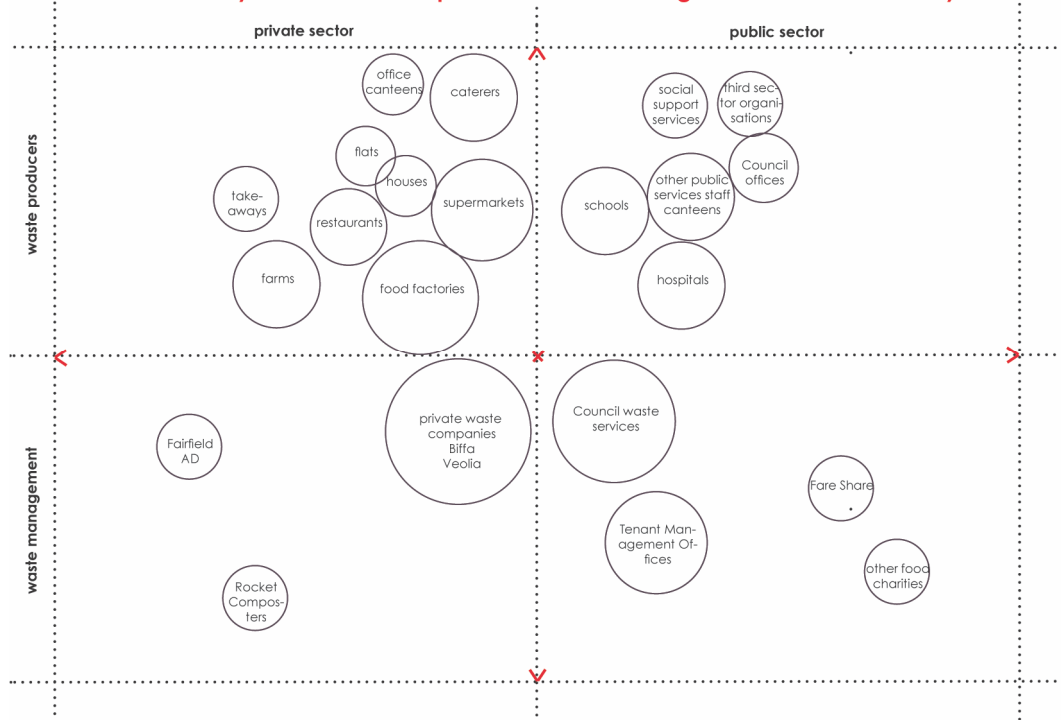
The demand for HiRise Gardens stems from the increasing pressure on local councils to reduce the quantities of biodegradable municipal waste they send to landfill under the EU Landfill Directive. As of 2009/10, they will face heavy financial penalties for disposing of waste beyond their allocation. Local councils are developing new ways of dealing with biodegradable waste, such as differentiated or fortnightly collections. But such operations are largely written off in blocks of flats, where any kind of waste separation is logistically complicated and requires significant changes in behaviour.

Given the proportion of flat-dwellers in the UK's inner-city fabric and the failure to design infrastructure fitting to these demographic requirements, this represents a huge loss to local Councils. In fact, in the London borough where we intend to run a pilot for HiRise Gardens, flats constituted about half the properties – half the potential waste savings in this case are consequently lost.

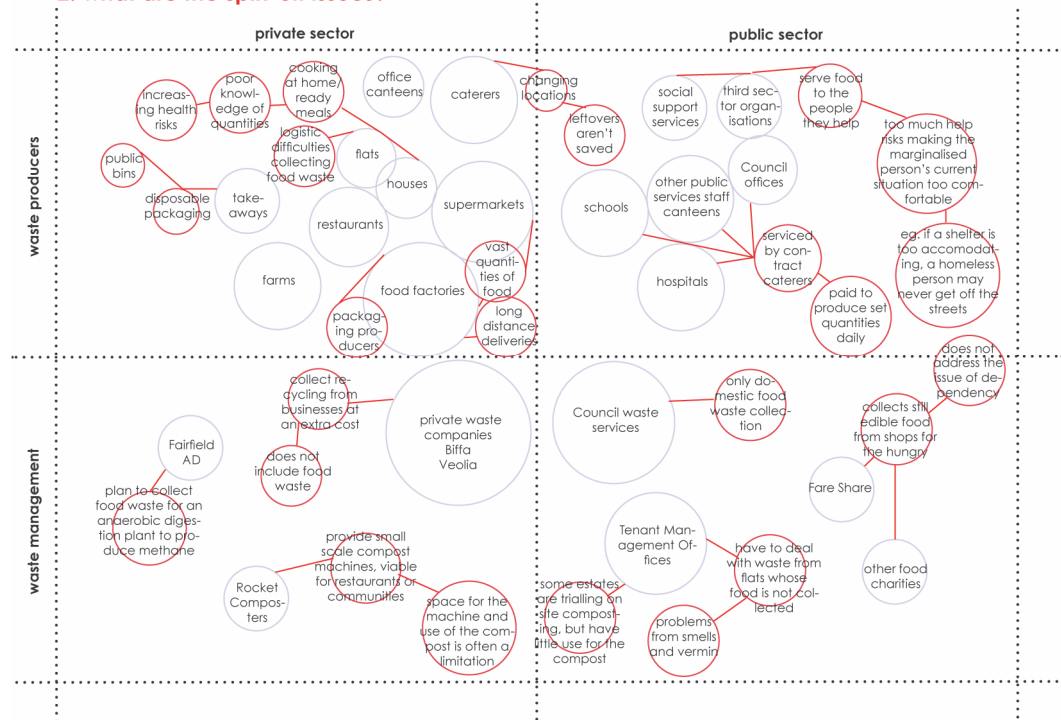
Successfully removing biodegradable waste from blocks of flats is ultimately a connectivity issue that depends on the creation of systems that will help residents understand the issues and inspire them to deal with their waste differently. Former local councillor Stuart Singleton-White, talking about the problems of waste minimisation in Peterborough, indicates the current failings: '...the root of these problems lies in the disconnect between those local politicians and members of the community, coupled with very poor communications skills for both the politicians themselves and from the PR teams of the respective council: a clear lack of creativity here often results in exciting opportunities being lost and failing to excite: cases failing to be made and policies developed in isolation' (Jonathan Porritt's blog, comment posted 1 June 2007).

By mapping out the common problems of dense urban environments, we were able to visualise the needs of different groups of individuals and find their complementary symbioses. A series of maps helped us identify the key players in private and public waste creation and management, the individual issues of each and how they might help each other. Finally through these maps we were able to highlight the areas where design's intervention might be most effective. (see plates 1 – 4)

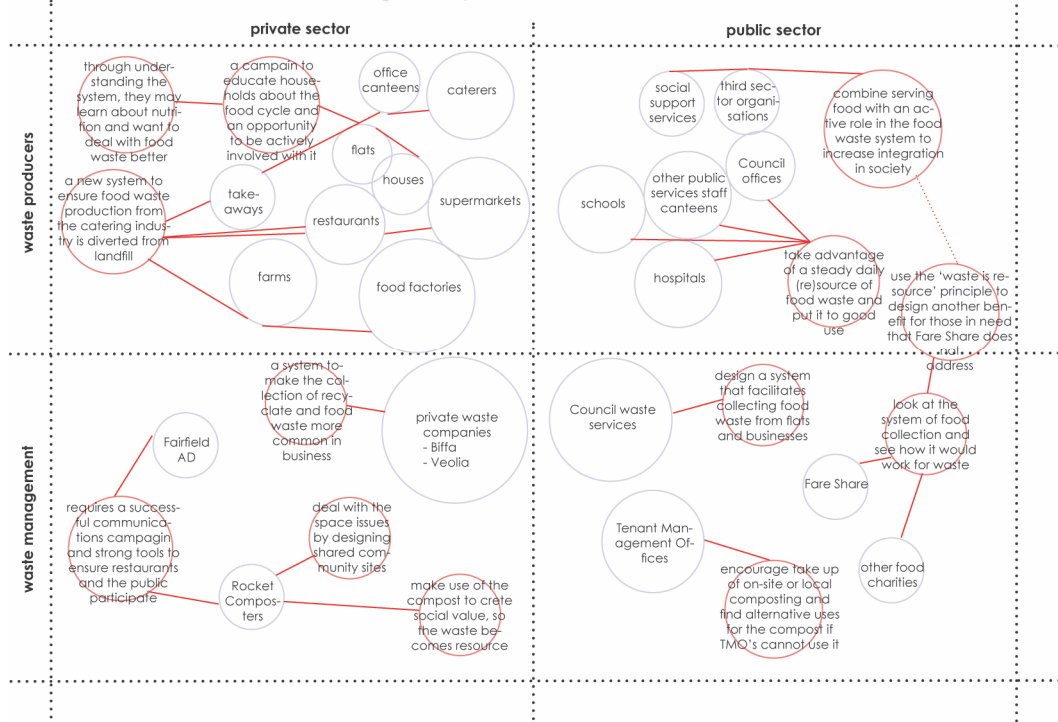
## 1. who is currently central to waste production and management in the community?



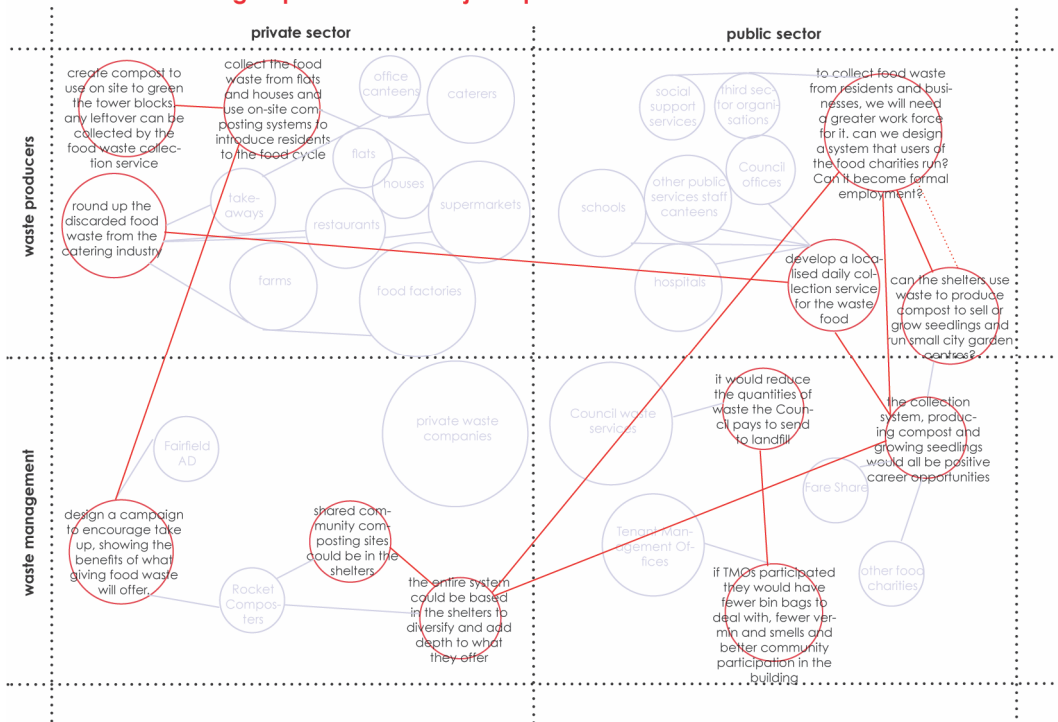
## 2. what are the spin-off issues?



### 3. which are the areas for design to tap?



### 4. which are the groups and needs to join up?



One of the clearest links that emerged through the mapping process was the potential of joining up the problems relating to biodegradable waste with

those of homelessness. When we contacted the London-based organisation, Thames Reach, whose mission is to reintegrate homeless people into work and society, we discovered they currently support 550 individuals already on the path to re-integration in our sample borough. These 'service users' are accommodated in the very Council estates that are the focus of our proposal for the borough's waste problem. In this environment they are often seen as something of a blight, largely unemployed and around 50% with alcohol-dependency issues (Rough Sleepers Unit 1999). In fact one of the biggest challenges that face these service users is gaining regular and dignified employment: when surveyed in 2007, about 79% said they would like to work, but currently only 10% are actually employed (Thames Reach 2007). This huge discrepancy seems to be partly caused by over-expectations of their working capabilities, as well as a prevailing situation where anything less than fulltime work (often difficult to cope with initially) could well leave them worse off than being on benefits.

This poses another problem for the Council, as the cost of having many economically inactive residents on estates can be substantial. It can lead to neighbourhoods becoming run down as people have little disposable income and a lot of time on their hands, sometimes leading to anti-social behaviour. Furthermore for central government they represent a cost in terms of benefits payments, and lost revenue in tax and rent. Therefore providing manageable and respectable jobs to the formerly homeless in a way that brings them closer to their communities while improving the local environment and providing a valuable service, offers multiple benefits.

Our first task was to build a business case to prove the social, environmental and economic advantages of joining up these problems.

## **The business case**

The UK has one of the worst recycling rates in Europe. Only Greece sends more waste per capita to landfill (Eurostats 2005).

Furthermore, an estimated 68% of municipal waste is biodegradable (Defra 2007), and about a third of all food bought is thrown away (WRAP 2008). An estimated 2% of the UK's greenhouse gas emissions come from the production of methane from material biodegrading anaerobically in landfill (Let's Recycle website).

Landfill, once an easy way to dispose of our increasing waste streams, is getting more scarce and expensive, with gate fees and government taxes increasing. Legislation is forcing private and public waste management bodies to look for alternative means of disposal. These include anaerobic digestion and EfW (Energy from Waste) plants, both of which require substantial capital investment and use existing models and infrastructure with some shifts in the way waste is collected and treated. Whatever the disposal system, there is still a need to address the way individual householders perceive and manage their waste streams.

Our business model is based on Councils' paying HiRise Gardens to reduce the amount of BMW tonnages to landfill. By putting systems in place now we are preparing Councils to not only save money on landfill tax and potential fines but to generate income from the sale of landfill allowance credits. On

top of that, we expect to generate income from waste collection beyond the estate as well as substantial revenue from cultivating seedlings and selling mini-gardens for urban vegetable growing.

## **Waste Infrastructure**

Like many other systems that we depend on, waste management is for most of us invisible. We play no part in it beyond our doorsteps, making it easy for us to forget about it and its consequences. But getting people to participate in recycling schemes can be challenging.

The system we are developing provides every household in a housing estate with a bin to separate food waste, and an on-site community composting machine that transforms it from waste into compost. The compost can then be used for localised landscaping of the estate's public spaces and for nurturing fruit and vegetable seedlings, some of which will be returned to the estate, the rest sold. In current world demographics, where for the first time, over half the global population is living in urban areas, with a consequential loss of contact with nature and natural cycles; we believe the introduction of edible plant life into Council estates is a powerful learning tool that will help people understand the loop in which food can grow from food waste.

The time is ripe for this kind of intervention: across the world there are numerous indications of urbanites' desire to reconnect with nature and improve the experience of food and eating. Political pressure led to the exploitation of Havana's urban landscapes for food production, which now provide over 60% of the city's food (Viljoen and Bohn 2005); in the UK, allotment space is increasingly in demand, and for the first time, last year the sale of edible seeds exceeded that of flowers (Horticultural Trades Association 2008). Communities are mobilising to improve their green spaces, such as shown by the underground Guerrilla Gardeners; and the cultivation of a vegetable garden in the Anderson Shelter in St. James' Park (Dig for Victory: War on Waste 2008), right in front of Buckingham Palace, is evidence of the food gardening renaissance reaching mainstream society.

The benefits to wellbeing of direct contact with soil and plants are proven in many areas of research; Thames Reach, our partner organisation for homelessness, already sends some service users to help out at a farm in Sussex as a therapeutic measure, leading to several users expressing a desire to relocate permanently.

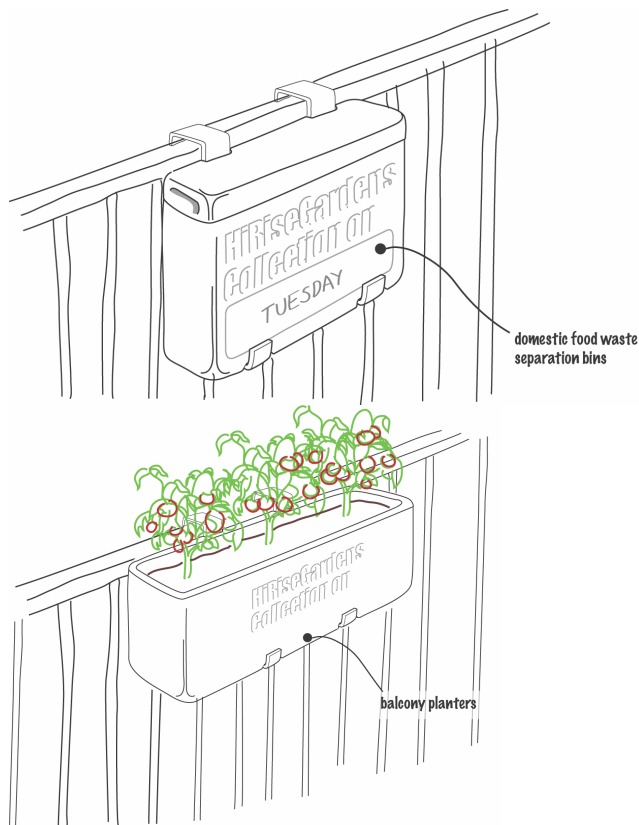
The experiential learning of the residents close-up view of the transformation of their waste materials into a resource from which they can directly benefit, is more valuable than educational leaflets and fines, which offer no real understanding of the issues. We perceive the thousands of available linear acreages of housing estate balconies, walkways and communal spaces as prime locations to be exploited for the cultivation of food plants. This has the potential to be a multiple win situation: it would enhance the aesthetic quality of the spaces, giving residents daily experience of natural and growing cycles and hopefully providing some edible benefits too. We suspect that the constant presence of gardening and waste management staff on the walkways of the estates might have the added advantage of reducing delinquency.

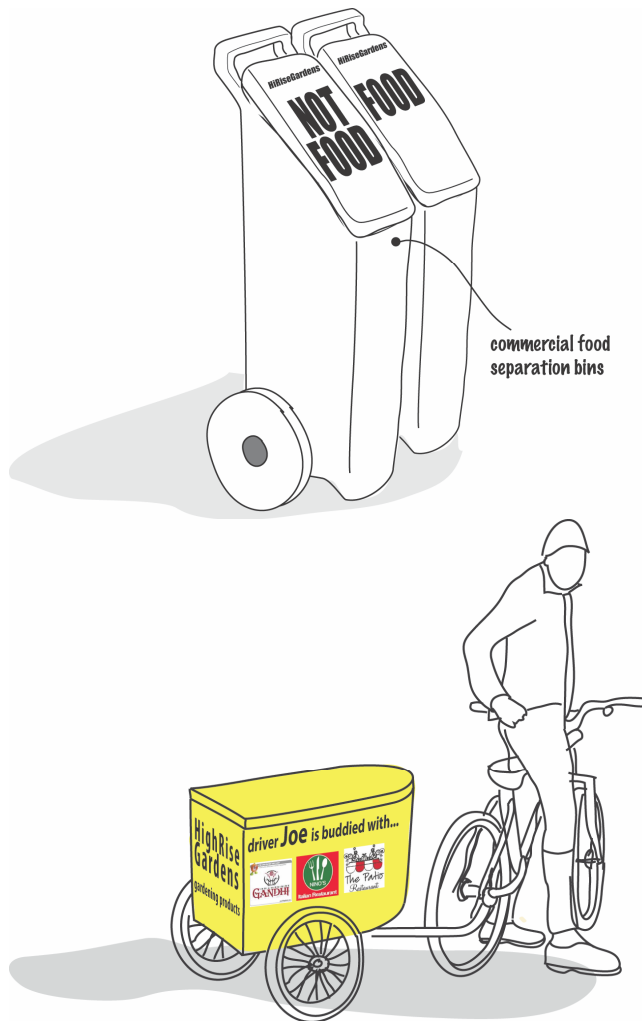
Beyond the estates, there are further business and social benefits to be had. Since commercial and public sector activities must pay extra for their waste collection, they could make savings if HiRise Gardens offered a more competitive rate than other waste companies for taking the biodegradable waste off their hands. Collection from these other sources, which might include hospitals, schools and restaurants, would also provide extra raw material for the composting machine and expand the staff's engagement with the wider community.

## The Design Challenges

HiRise Gardens is a combination of products, services and systems that encompass a variety of design challenges for such issues as brand, product, service and communication. Our intention is to deliver HiRise Gardens with the maximum design capability at each step by tapping into the knowledge and expertise of other design professionals. We will be documenting our progress along the way to build cutting edge methodology to disseminate to the design industry.

For the creation of the physical products – which include domestic and commercial bins, window boxes and planter/propagators – we are working with gardening products manufacturer, Stewart Plastics, who will also be able to offer this range through its existing channels of distribution. We will also design a range of bikes and trailer accessories to allow employees to make easy and visible daily collections, of waste around the extended neighbourhood.

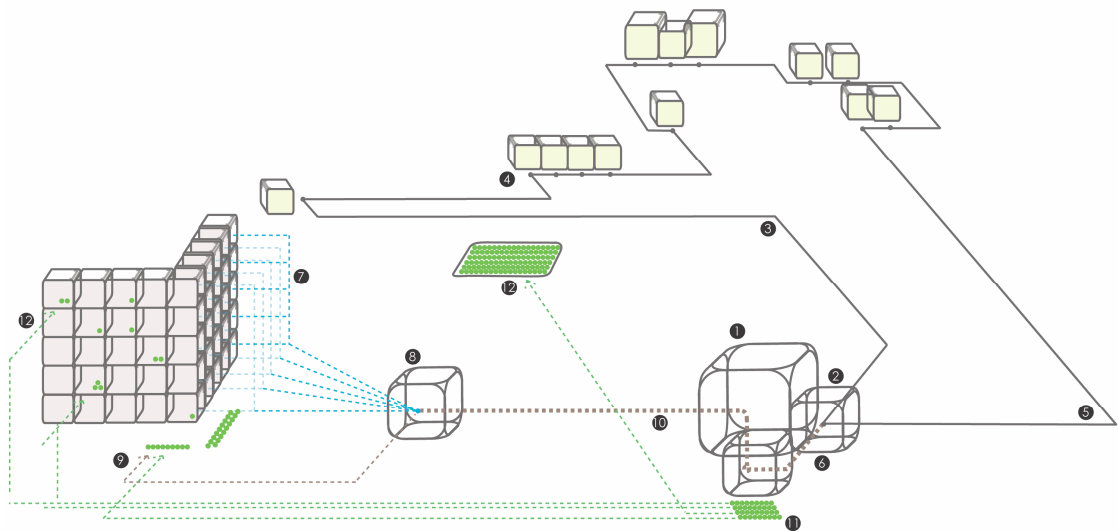




Brand expertise will be needed to build and maintain brand consistency throughout the organisation. This will ensure adhesion from within the organisation and without. There is a clear need to promote HiRise Garden's activities through excellent communication, which will also be important in selling the products and services that HiRise Gardens will offer.

## System for External Collection

- ① The shelter or day centre
- ② Its on-site composting machine.
- ③ One of the members sets out on their route around a planned group of local restaurants or grocers etc.
- ④ All the food waste that they have separated out is collected.
- ⑤ With a full load, the rider returns to the day centre
- ⑥ where the food waste is processed and turned into rich compost.
- ⑦ At the same time, food waste from local flats is also collected.
- ⑧ It is then turned into compost in their on-site machine
- ⑨ Some of the compost is used in landscaping the building's grounds or is taken by residents if they want it.
- ⑩ The rest is collected by the shelter team.
- ⑪ The compost the shelter makes along with the excess compost it collects is bagged for sale or used to grow seedlings.
- ⑫ This can then be sold back to the community to green the tower blocks and public space.



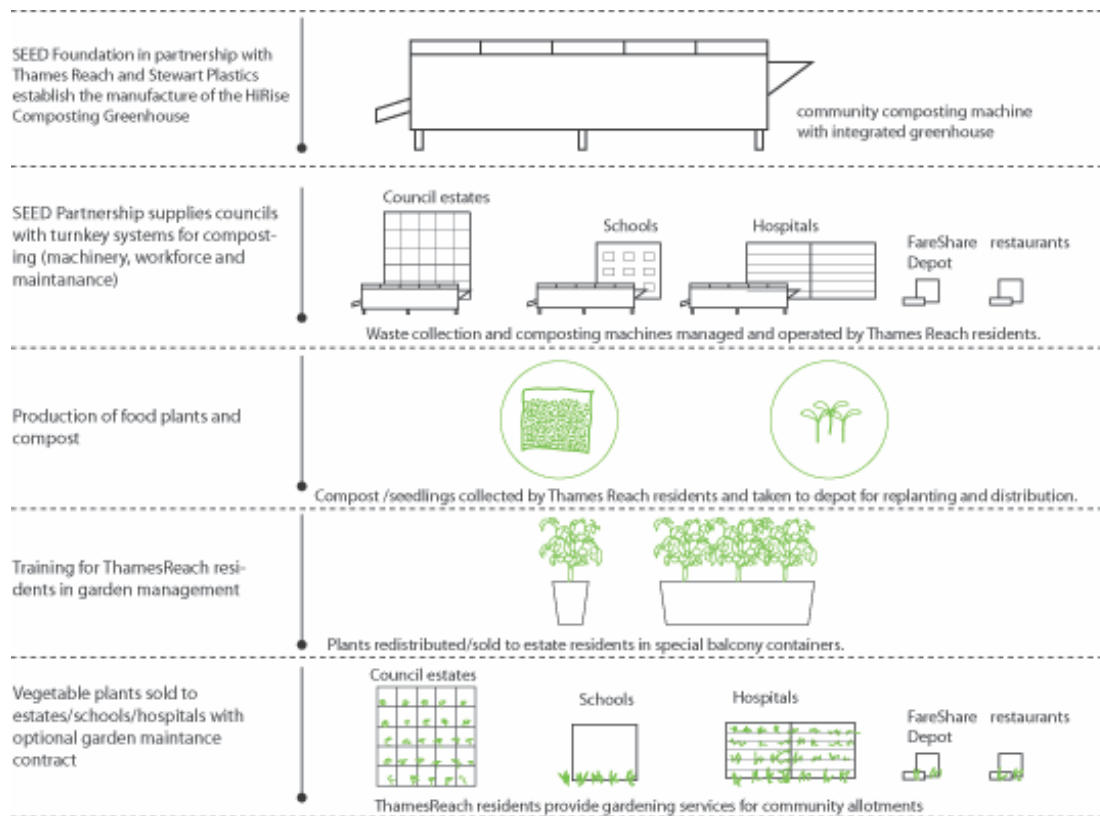
Each of the various service aspects will need to be co-designed with the various stakeholder groups – Thames Reach service users, estate residents, external clients etc. We plan to run a number of workshops with each of these to get a better understanding of their various needs. For example, we currently have only an outsider's idea of what it means to have been homeless and to be striving to be once again a part of mainstream society. Working with Thames Reach users we hope to gain insights into what drives them, so that we are better equipped to gradually build up their working routine in a way that is both stimulating and satisfying without being over-demanding. Equally, the success of the operation will depend on striking a balance in the relationship between the service users and the other estate residents.

With them we must design a system that works according to each of their needs and desires, and also ensures their smooth interaction with each other. This co-design will influence the design of the tools for collecting and transporting food waste, the schedules for collections, the communication material and awareness-building aspects of the operation. An important design aspect will be in the building of the brand, which will hold the whole operation together and create an entity with which people will want to be associated, both from within the housing estate and beyond. It will be a means to communicate and build support for the operation in the wider



community, important in the construction of a market for its gardening products and services.

## The Collection System Diagram



## Training

A well-designed training programme is another critical element of HiRise Gardens, which will bring with it further potential for public funding. As we have already mentioned, Thames Reach service users are at different levels of reintegration into mainstream society. Different levels of skills are required to make HiRise Gardens work. At the lowest level, employees must collect waste bins from outside each dwelling on a given day and transport the waste to the on-site machine. Basic training for operating the machine, which includes sifting through the food to filter out contaminants, controlling temperature and humidity and emptying and storing the compost produced, will be provided by the machine's manufacturer. The regular contact with the estate residents will be a valuable opportunity for the staff to interact with their neighbours, building relationships and potentially playing a key role in connecting the community. Beyond the estate, as the collection extends to local businesses, some staff will venture further and hopefully build similar relationships in the commercial sector, broadening their future employment opportunities.

As the enterprise develops and HiRise Gardens operates on multiple estates across numerous boroughs, it will require a structured hierarchy and management teams to oversee its smooth-running. We want to offer the

opportunity for professional progression within HiRise Gardens and anticipate that staff will be able to progress from the collection team to management, perhaps training new staff themselves.

Aside from the waste management, the other critical function of the enterprise is in cultivating and marketing seedlings as well as offering gardening and landscaping services, on the estate and beyond. Building on our experience of developing training programmes (Designing Demand 2006), we plan to create a combination of classroom-style teaching with practical mentor/student modules in which new employees are initially teamed-up with a more experienced partner, leading to a learning method that is effective because it is both experiential and strongly supportive.

## Conclusion

We are planning to pilot HiRise Gardens over the next few months on a London housing estate, with the support of Thames Reach and grant funding from various sources. The piloting period will provide an opportunity to develop and refine tools and methodologies through individual and group user-testing and iterative prototyping of services and systems. We will be designing evaluation methodologies together with the Policy Studies Institute - that are appropriate to the long-term, soft benefits we anticipate HiRise Gardens will create; and we will go on to disseminate these findings to the design community.

Our intention is for this enterprise to become a blueprint to be scaled-up and rolled-out –an aggregation of the local to move the national. SEED Foundation intends to use this and further enterprises as a test-bed for developing new methodologies to enable designers to uncover the new professional paths in sustainable development.

## References

Brass, Clare, Flora Bowden and John Moseley. 2007. *Design for Sustainable Change – a positioning paper*. Design Council.

DEFRA. 2005. *Securing Our Future –delivering the UK sustainable development strategy*. DEFRA.

Demos. *The Collaborative State: how working together can transform public services*. Demos, 2007.

Design Council website, *Design Index*.

<http://www.designcouncil.org.uk/en/About-Design/Research/Design-Index/>

Design Council website. *Our History*.

<http://www.designcouncil.org.uk/en/Design-Council/1/Our-history/>

Designing Demand. <http://www.designingdemand.org.uk/>. Design Council.

Dig for Victory: War on Waste. 2008.

<http://stage.iwm.org.uk/upload/package/79/DigForVictory/index.htm>

Dott07. Low Carb Lane. Designs of the Time 2007 Design Council and One North East

<http://www.dott07.com/go/lowcarblane>

Dott07. Move Me. Designs of the Time 2007, Design Council and One North East

<http://www.dott07.com/go/moveme>

Eurostats. 2005. *Management of Municipal Waste for EU 15*. Eurostats.

EU Landfill Directive. 2005.

<http://www.defra.gov.uk/environment/waste/topics/landfill-dir/>

Guerilla Gardening website. <http://www.guerrillagardening.org/>

Horticultural Trades Association website. <http://www.the-hta.org.uk/>

Jonathan Porritt blog. <http://www.jonathonporritt.com/pages/>

Let's Recycle website.

[http://www.letsrecycle.com/do/ecco.py/view\\_item?listid=37&listcatid=321&listitemid=9652](http://www.letsrecycle.com/do/ecco.py/view_item?listid=37&listcatid=321&listitemid=9652)

Rough Sleepers Unit. 1999. *Coming in from the Cold*. Homelessness, Overcrowding and Worklessness Division. Department for Communities and Local Government.

Social Enterprise London. <http://www.sel.org.uk/>

Steffen, Alex. (ed.). 2006. *World Changing*. Harry N. Abrams Inc.

Suspronet. 2004. *Sustainable Product-Service Systems*. Suspronet.

Sustainable Development Commission and National Consumer Council. 2005. *I Will If You Will –Towards Sustainable Consumption*. Sustainable Development Commission.

Thames Reach. 2007. *The Costs and benefits of formal work for homeless people*. Thames Reach.

Think Public. 2008. Youth Emergency Health Services.

<http://thinkpublic.com/news/?p=180>

United Nations Environment Programme (UNEP). updated 2005. *Product – Service Systems and Sustainability – Opportunities for Sustainable Solutions*. UNEP.

Viljoen, Andre and Katrin Bohn. 2005. *CPULs – Continuous Productive Urban Landscapes – Designing Urban Agriculture for Sustainable Cities*. Architectural Press.

Waste and Resources Action Programme (WRAP). 2008.

<http://www.lovefoodhatewaste.com/>

Zest Innovation. 2008. Service design with Northumbria University.

[http://www.zestinnovation.co.uk/Pub\\_sec\\_pages/Pub\\_sec\\_clients.html](http://www.zestinnovation.co.uk/Pub_sec_pages/Pub_sec_clients.html)

## **Clare Brass**

Clare Brass comes from a design background. Alongside her product design consultancy in Milan she also ran a number of projects tackling social and

environmental issues. She has established several design-led initiatives and organisations dealing with social or environmental issues. Campaign Leader at the Design Council from 2004, she became Leader of Sustainability in 2006. With Flora Bowden, she established SEED Foundation.

### **Flora Bowden**

Flora Bowden graduated in Fine Art. She worked in the field of sustainable architecture in London before taking up the position of Environmental Design Coordinator at the Parliamentary Design Group (Policy Connect). She collaborated with Clare Brass on a Design Council research paper about the future role of design in the sustainable development agenda. With Clare Brass, she established SEED Foundation.

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