

Slide 1



We look at the world around us through different lenses- shaped largely by our lived experience, values and context.

Want you to take a moment to look at this picture.....

What do you see???

Notice what you might not be noticing.....and be aware of your own lenses or assumptions.

Turn to someone you don't know...

Want you to talk about the positive things you noticed about this home.

Is it a home, What do you like about it?

What do you like about your home?

If you had to upgrade your home, what would your next project be?

Thank you, now...Consider:

What if you just arrived in a town?

No job, no savings, no social network and access to social capital and support...

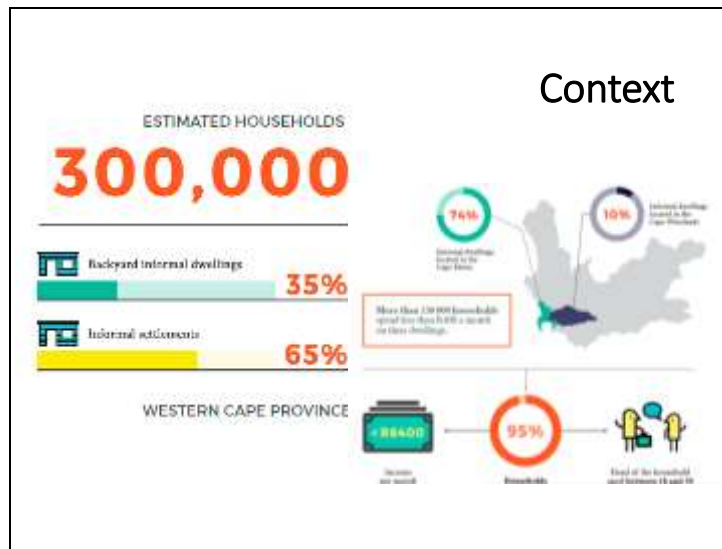
No ownership and use rights?

Not sure if its permanent?

What if you had a shack and wanted to upgrade it, but cant walk into a bank to get access to capital....

How would you meet your need for shelter, build a home or upgrade it over time? Especially in an environment where the government cannot meet the housing delivery backlog, let alone the increasing demand for suitable housing?

This is a reality in the majority of our informal settlements.



In w cape alone

- 300 000 households, just under 1 million people
- 35% backyarders, 65% informal settlements
- 95% earn less than R 6400pm per household
- 2/3 people spend less than R 400pm on home
- 40% of these households have no access to microfinance- that's 100 000 households.



With the policy shift from provision of top structures to that of site and service- how does government **create an enabling environment for the incremental upgrading of informal settlements**? How do we enable homeowners and dwellers to establish and incrementally upgrade their homes, in situ over time, and create qualified, dignified living spaces?

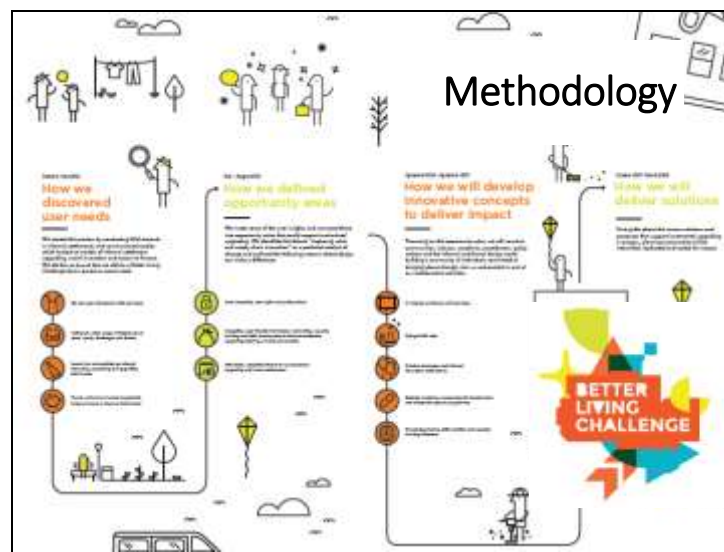
This is the question being posed by the Better Living Challenge, a flagship project of The Western Cape Design Strategy. As implementing agents of the strategy the CDI, together with Western Cape Department of Human Settlements and the Western Cape Department of Development and Tourism is pioneering a Design-Led process locally to the benefit of all our communities in the hope that this approach will serve as a blueprint for innovation in other sectors , in addressing service delivery and in tackling complex policy and wicked problems within government .

The BLC was launched under the Premier's 110% Green programme, and consists of a series of challenges running over a five-year period. it highlights how good design can improve lives, and that it has the potential to catalyse the development of innovative home improvement products, services and solutions that that can catalyse change and bring about better living, improve the lives of our communities

It's a Program designed as a problem-solving process with the end user at the centre, it seeks to raise awareness, share knowledge, and incubate ideas and processes- from the 'bottom up'

But now I ask- How can we even start to find solutions, if we don't understand the problems and challenges experienced by informal settlement dwellers???

Enter empathy, walking a mile in another's shoes....We needed to understand the context and needs of the users...and this is where our methodology is a little different....



For the BLC we used the Design thinking methodology to inform the process .

Design thinking is a tool used by designers- it's a visualisation tool that help to clarify thinking, making sense of complexity and connecting the seemingly unconnected.
.....it's a process that is broad, collaborative, user-centered

which is divided into four distinct phases – discover, define, develop and deliver,

Is based on empathy... understanding the needs, goals and behaviours of the users, which drives the direction of the process to deliver the most appropriate outcomes in different configurations

Most importantly the approach is underpinned by the cocreation of ideas, rapid prototyping, refinement and delivery of 'best fit' solutions

During this presentation I hope you will see how this approach holds merits for problem identification and solution finding.

Slide 5



We started the process by trying to understand users needs and context.

We wanted to use these insights to inform our objectives, use them **as a starting point for designing better**...to ground the project in reality, and build on whats already working in communities.

Step 1: How we discovered user needs

We started the process by conducting field research in informal settlements and commissioned studies which looked at models of informal settlement upgrading, social innovation and access to finance.

Ethnographic research

We had open discussions with end-users, Desktop research, Gathered a wide range of insights about users' needs, challenges and desires, Learnt how communities are already improving, expanding and upgrading their homes AND Found out how low income households invest and save to improve their homes

15 Government Departments, 10 Civil Society Organizations, / - 70 Residents from 10 Communities, +/- 15 Industry members, 25 Researchers from (academia, research institutes, government departments)

Insights on Needs

- Correct & Accessible Information
- Skills Development & Capacity Building
- Upgrading Process
- Place-making

Outcome was a **User needs assessment** which is available for consumption.

Informal Settlement Upgrading research

focussed on models (upgrading, typologies, built forms, participatory planning processes, conceptual approaches etc.) that work (or don't work) and looked to international and local examples.

Streams (broad areas of 'Paper', 'Practice', and 'Place'), 11 Models, 205+ Projects, 25 Countries, 50 'Paper', 155 'Practice' + 50 'Experts'

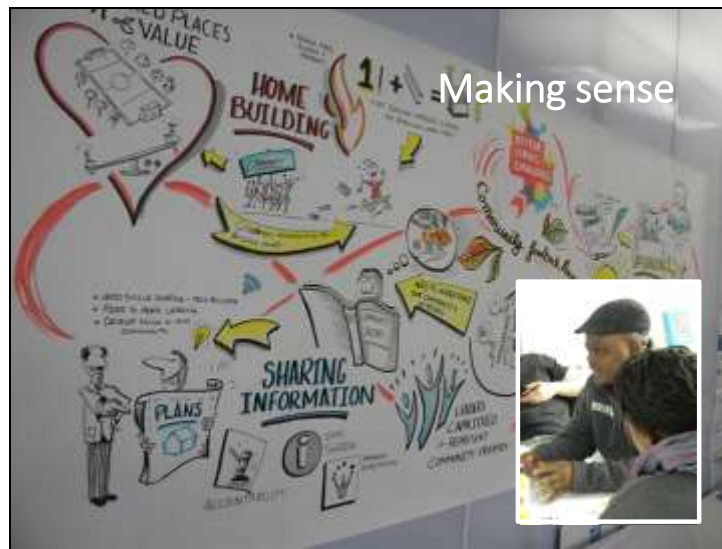
Outcome was a **Upgrading precedent report** which is available for consumption.

Informal Housing Finance

looked at Market Profile, Finance Products & Stakeholder value chain/ecosystem, international benchmarking, included statistical analysis, desktop research and targeted interviews with housing finance experts.

Produced **The ecosystem map**- can also be used as a tool to identify potential partners for conceptualisation, "prototyping" and implementation and indetified areas for innovation which included

- Support for **affordable material access/non-cash finance** : Including materials "layby" or "banks" as well as promoting more beneficial links into the builders rubble supply chain
- **Improving functioning of informal finance products**, and linking to knowledge and capacity building around incremental housing: Including stokvels, community saving schemes, peer-to-peer lending, informal instalment transfers/transactions, informal employer loans
- **Support to contractors, small-scale landlords and developers**, as well as accessing **enterprise and supplier development funds** that can indirectly help to increase affordability and quality for end users



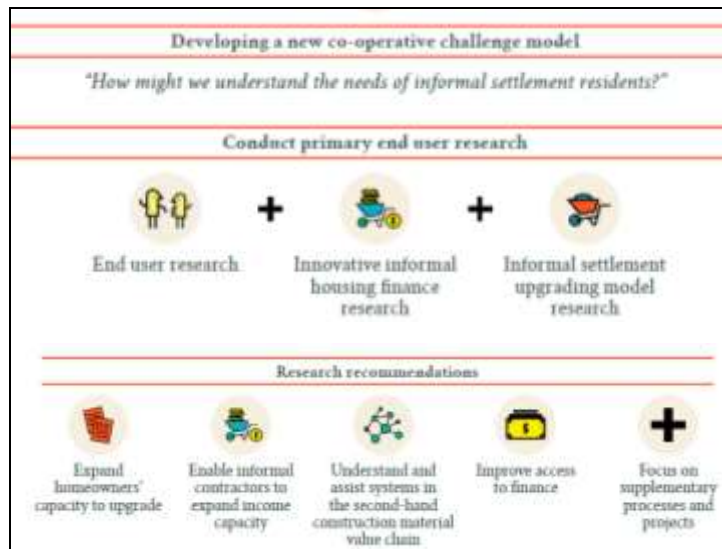
Step 2: After this we Synthesized and made sense of the user insights and narrowed these into opportunity areas that could support incremental upgrading.

We identified the theme: “exploring value and supply chain innovation” as a potential catalyst of change and following streams where design can make a difference

Suggested alignment with provincial Human Settlements dept mandate- *To create and enabling environment for incremental improvement/ informal settlement upgrading*

Step 3: Next we Identified BLC objectives

- Expand home-owner’s capacity to upgrade homes (incl. self-build financing and DIY)
- Enable informal contractors to expand income capacity (greasing the cogs of the waste economy, and working with construction materials value chains)
- Focus on the development continuum and provide Supplementary Support to Projects

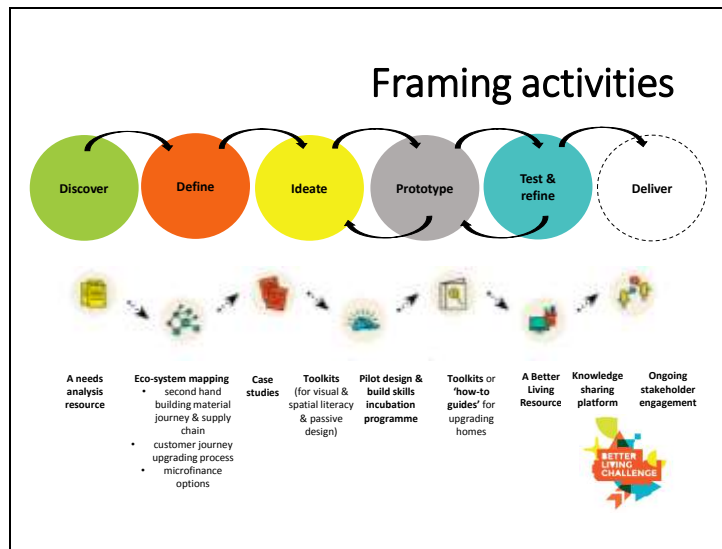


Step 4: Development of streams

From here we articulated clear work streams to meet these objectives

- **Skills development programme** How might we enable the informal contractor to build and improve their business (expand income capacity) and to enhance the individual homeowner's capacity to improve their own home. Crucial to this, is the idea that each and every home-owner be seen as potentially being able to generate an income, because of the potential of incremental upgrading.
- **Innovative finance options going beyond cash:** How might one provide innovative financing options that go beyond cash, providing budgeting/ designing and maintenance training for customers? (Cash + incremental building roadmap support + local supply chain options + contractors in area + DIY options?)
- **Material value chain innovation** in support of skills development stream. How might we leverage the material value chain to increase innovation in the housing material supply market?

This slide provides a snapshot of these steps



Having established the value we wanted to create we framed activities, so that outcomes will actively address user needs; ...this slide shows how it all comes together with the **roadmap of activities** with each activity informing the next, and the bearing they have on each other

The approach is not to validate preconceived solutions or suggestions, its process driven. And aligns with the steps of a Design Thinking process.

Over the next two years, the BLC 2 will host and run a series of projects and key activities to support its main objectives.

- Build on lessons learnt during the research phase
- Allow 'on the ground' experiences to inform responses and programme design
- Pilot projects to appropriately collate necessary base contextual information
- Partnerships/ collaborations for implementation, rapidly prototype and test innovations with partners and communities
- Iterate, Reflect and document the learnings (creating a meaningful learn and share environment) through various knowledge sharing platforms
- Collaborate with the network of community-based organisations (CBOs) and NGOs -to add value to projects and processes
- Act as a springboard for systemic catalytic change through co-creation.

Now explain the activities and aims:

1. Needs Analysis Resource: a resource to demonstrate the discovered and defined landscape of incremental upgrading in order to better understand how to upgrade incrementally

2. Value Chain (Ecosystem) Mapping of the second hand building material journey, microfinance options and upgrading process – Opportunities and challenges

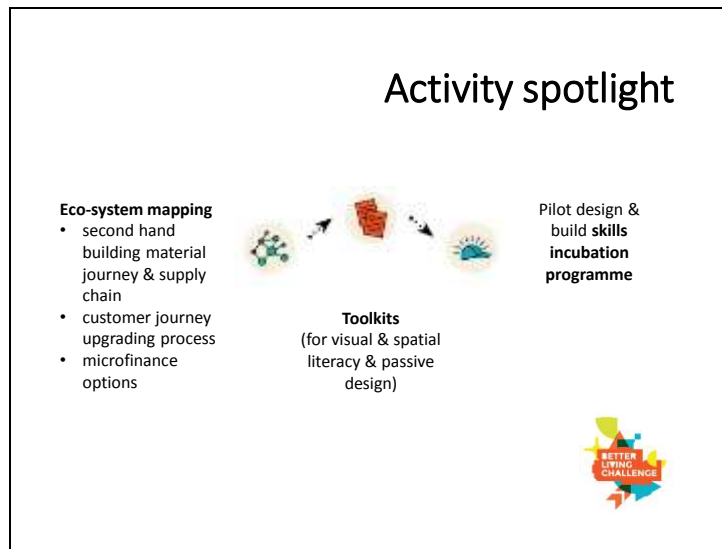
3. A Toolkit - "how-to guide" and communication tool for exploring the different ways of upgrading; to assist residents to create better living conditions under different circumstances. Residents will be informed of the

different ways/options to upgrade and develop an understanding of the underlying principles of how to upgrade

4. Prototyping design and build skills development incubation programme

5. "how-to guide" exploring the different ways of upgrading the 3x3 emergency upgrade housing for design and build service providers that service the informal settlement upgrading sector/ **Better Living Resource** (i.e.: print/web, and Video tutorials etc.); which builds on workshops conducted and lessons learnt in the process (i.e. documented sessions)

6. Knowledge Sharing platform: one of the main findings of the user needs research was the need for correct and accessible information, expressed by different stakeholders at all levels, including institutions and households. This includes an interactive website portal and critical knowledge exchange events, designed to be leveraged by the BLC 2 strategic communications plan.



Now shine a spotlight on a few of these activities...

The upgrading journey mapping , value chain mapping of second hand building materials work, the toolkits developed And then the Skills dev incubator

As they all have bearing your areas of research and interest.



The Customer journey mapping of the upgrading process

The mapping of different the upgrading processes has played a significant role in terms of being the glue between the eco-systems/ value chain of the building-related materials and finance streams.

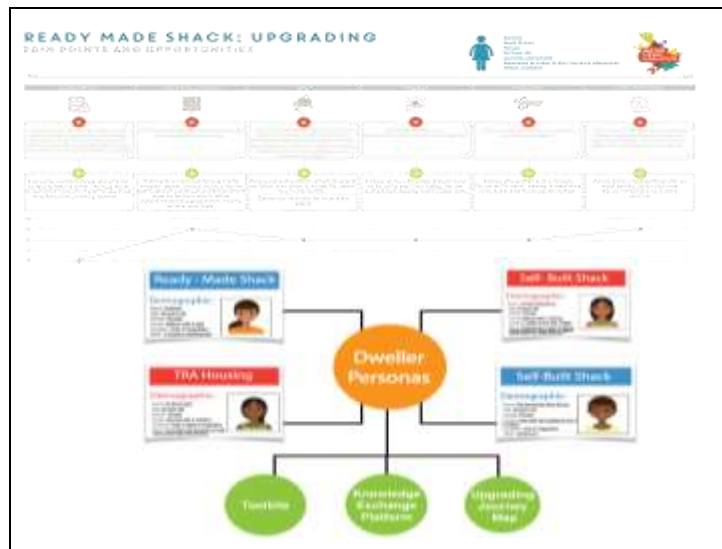
It Looks at the customer journey mapping of the upgrading process to understand the different challenges and opportunities that exist through the upgrade process.

The goal of this workstream is to ultimately develop a roadmap of upgrading, outlining upgrading options, steps in the upgrade process, who to talk to and how to mobilize.

It is being developed through a range of research activities and on site learning by doing and co-design

We've been collaborating with partners through exchanges:

- **Analysed four informal dwelling typologies** and **profiled** commonly shared issues, needs, upgrading undertaken, materials used, payment structure, and future aspirations.
- Developed of **four persona's of people who have undertaken upgrading activities** in the typologies studied...and turned these into customer journey maps
- Sense-checked customer journey maps by interviewing and studying upgrading process (re-blocking in Flamingo Heights, Lansdownne).
- **Reblocking Customer Journey Map-** research into and mapping of *re-blocking process in Flamingo Heights*, Emmy de Bont, a student from **Fontys Academy for Creative Industries**, Fontys Living Lab exchange
- **Workshopping an alternative to reblocking with CORC-** three day workshop, Ekuphumleni, Marconi Beam, Milnerton
- **OPTI – collaboration** with University of Cape Town and University College London Looked at various housing typologies, their environmental performance and how they are upgraded over time. (15 building typologies)
- In-depth interviews with **people living in different housing typologies** (self-built shacks, ready-made shacks, incremental development area housing, Wendy houses, PHP housing, RDP housing, and discounted plots) were conducted.



All of these activities were rooted in user need, and facilitation of diverse participation .

Did research in Belhar, Khayelitsha, Gugulethu, Philippi, Nyanga, Wallacedene, Cross Roads, Fairdale and Ocean View, Vukuzenzele. On site interviews CPUT of 250 respondents.

The work provided insights into various upgrading journeys , served for us to observe patterns, document processes and create case studies and content

In particular they have led to the development of customer journey maps for the different users, as well as typologies which have fed into the on-going development and work-shopping of an upgrading roadmap, mapping the steps and processes of a typical end-user who wishes to upgrade their informal dwelling through different lenses and from different perspectives.

Use by broad stakeholder groups ranging from users to policy makers.

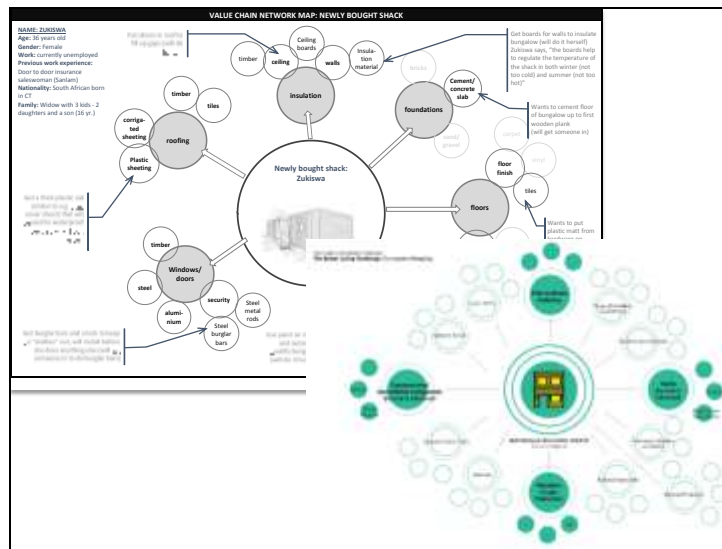


Another area of work that may be of interest is the **Value chain mapping of the second-hand building material journey/supply chain**

We are doing this to document and understand the material journeys and supply chains of various second-hand building materials in selected building-related sectors- and identify opportunity areas for the sourcing and supply of waste/ second hand material in building and upgrading shacks. .

We've done loads of action research, including taking learnings from other exchanges...

- **Mapped stakeholders**
- Drawn on typologies, personas and upgrading journey maps- **different lense looking at different building materials used** in each typology and to understand the **second-hand materials** end-users were using.
- **Mapped industries** generating waste (e.g. These sectors include: rubble / crushing yards; second-hand building yards; construction industry; film and music industry; brick salvaging sites; alternative building technology sector; landfill sites; retailers and small-scale shack traders.... which could potentially be redirected into the building process.
- explored the not only the type of material but the **flow path of second-hand building materials** used by end-users/ informal settlement residents (traced and document the journeys of different building-related materials).



In October, the BLC2 Team approached the circular economy consultancy, *Toma-Now*, to conduct **more focused primary research** into the Film and Music Sector and the Construction Sector, as both sectors were identified as opportunity areas for the sourcing and supply of waste/ second hand material in building and upgrading shacks.

The research findings were then developed into Value Chain Maps, which will be in the public domain soon



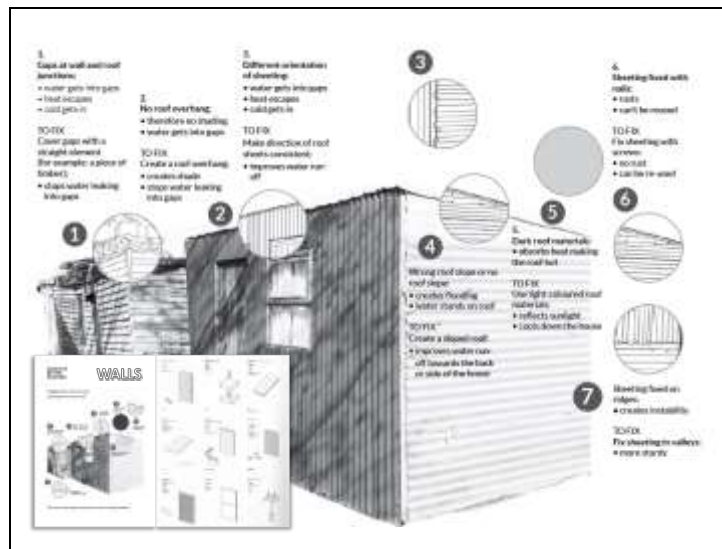
One of the major opportunities with this collaborative approach, is not only that we've co-generated ideas, but have also managed to glean insights into soft skills required for upgrading.

- Again we drew on on typologies, personas and upgrading journey maps- **different lense looking at skills** end-users were employing or lacking.
- 2x workshops with **specialist inputs** (co-hosted with Aurecon and Green Building Council of South Africa respectively).
- **design build** in Nyanga / Sustainable building practices

The team have developed an elementary upgrading **toolkit to communicate the principles of Visual, Spatial and Passive Design Literacy**.

This toolkit focusses on building better roofs, better walls, better openings, and better floors. Although aimed at end-users, the toolkit can also be used by NGOs CBOs and government officials – and will be accompanied by a “How-To/ Workshop Guide” in order to communicate best-case building practice.

- hackathon between Vega, Fontys ACI Netherlands and BLC looking at the development of a **communication toolkit for facilitators** and intermediaries to communicate with township residents in the process of upgrading their neighbourhoods and houses.
- Co-design work with Academy IDT, the hosting of an Academy IDT Industry Career Day – which gleaned learnings to inform development of an **innovation for upgrading toolkit** (which looks as floors, foundations and going double storey).



The first draft of the toolkit (Building as a metaphor for literacy) has been completed (2D illustrations of different typologies and 3D CAD drawings) and sense-checking/ testing of the toolkit was done. The toolkit will now be tested with intermediaries on site with different focus groups. The BLC team will be coordinating with PEP, CORC, VPUU and iKhayalami in this regard.

The BLC team will finalize the graphic design and layout of the toolkits for public domain soon- Fits with the NUSP toolkit currently used by government, could be employed in building support centres being proposed as part of ISSP

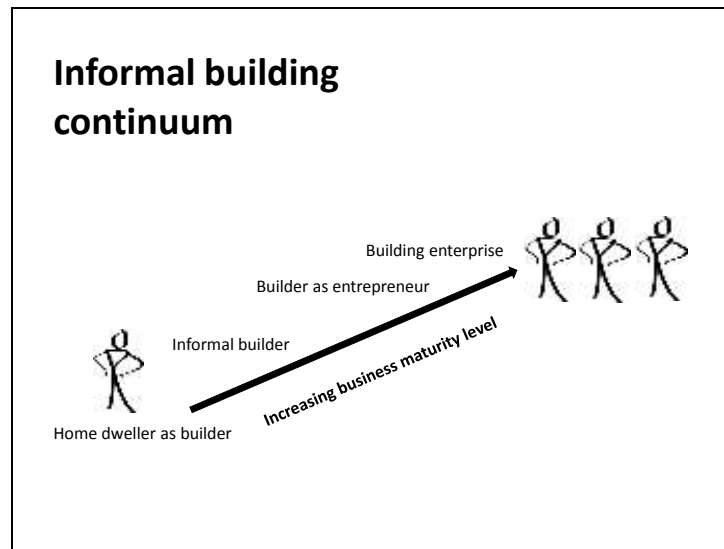


Last bit of sharing is around the **skills development incubator for home dwellers and informal contractors**

Research undertaken for the ethnographic part of the BLC Needs Analysis has revealed challenges to both informal builders and dweller-occupant as builders.

In particular informal builders:

- Have very **basic building skills**, with virtually **no training and technical grounding**, and a lack of passive design or visual literacy skills.
- (Most often) deliver **sub-standard/poorly constructed structures**, building and designing structures which are contextually inappropriate (in terms of safety, thermal comfort, affordability and sustainability of materials and design). The structures mostly **replicate what is seen elsewhere with little or no modification to suit the context**.
- Have **insufficient business management skills**, including a lack of capacity to comply with legislative requirements, an inability to register their business, show a track record or navigate construction management systems, and limited financial capabilities.
- Need **more work opportunities** , and depend on civil society organisations for planning and securing opportunities for building structures. They are unable to access larger, more profit-generating projects - particularly publicly-funded projects. In short, they cannot **access the market**, or thrive and **grow their enterprises independently**.
- Get **locked into and are dependent on local material supply chains and larger hardware stores** for two reasons: lack of transport (they rely on materials being delivered) and distrust of informal traders. They cannot buy stock in advance: the rule of thumb is that two shacks' worth of materials is kept at a time, and thus must be built and sold before more materials can be bought.
- Have **limited access to financing options and education on how to use money**, both in business and personal capacity. They suffer a lack of working capital to grow their businesses (low profit margins, less room for manoeuvring). There is also a **lack of financial instruments** that support incremental building and upgrading, particularly financing options that go beyond cash.
- Often **become targets for opportunistic crime when they visibly demonstrate business growth**. Having more assets, tools and materials on display turns businesses into targets for criminals, and losses through crime then hinder further growth



To address these needs and challenges a prototype of a Design Build skills incubator / program is being developed- move the informal builders up the continuum

Business case for the initiation of an incubator.

- capacity building and skills development;
- information sharing and showcasing of best practice;
- material supply chain innovation and improved financial instruments to support incremental building; and
- the enabling of this environment (for informal builders develop livelihoods and grow their business) through the unlocking of legislative barriers and policy reform

At a strategic level, the incubator approach aligns with the Draft Living Cape document, a response to the National Human Settlements Framework.

It responds to the need to support informal builders, and to promote better quality structures, with a resultant improved quality of living spaces and communities.



In terms of progress, CDI has held various internal meetings with our internal ED and Business Development teams to develop the required approach (15 institutional experience in growing enterprise, jobs fund, design innovation seed fund etc).

- **Design Build-process** resulted in co-design and building of a structure to serve as an artist residence at Nyanga Arts Development Centre, worked with 20 semi skilled builders and community members, lead by Craft the Thinking Hand
- **Trailing the small-scale builder- Koaspilot**, a Denmark-based business and design school, to understand the building process of a small-scale builders .
- Spent time with **Mama Princess** is an entrepreneur in Nyanga, **mapped her value chain as well as did a business assessment of her business model** and a physical build to understand the skills required and material flows.
- **Upgrade roadmapping** with inscape- and **skills** required
- **Stakeholder map** and interviews 50 builders
- **Looked at other** social innovation , design build schools and Incubator case studies

A Report of motivation, need and aims of the incubator and the Incubator **Blueprint** has been developed and is being workshopped DEDAT and DOHS.

Steercom members are being identified and are to be approached in early 2018.

Curriculum and program development, further research into the business case, recruitment of incubatees and partners will be done in quarter four and kick off is planned for April 2018.

The goal is that the prototype, or blueprint, of the incubator and supporting resources should become a strategic resource to improve productivity, innovation and competitive advantage in the informal builder sector — with a long-term value that lies in the prototype being transferable, as well as easy to share, replicate and upscale.

Value of a Design-Led approach

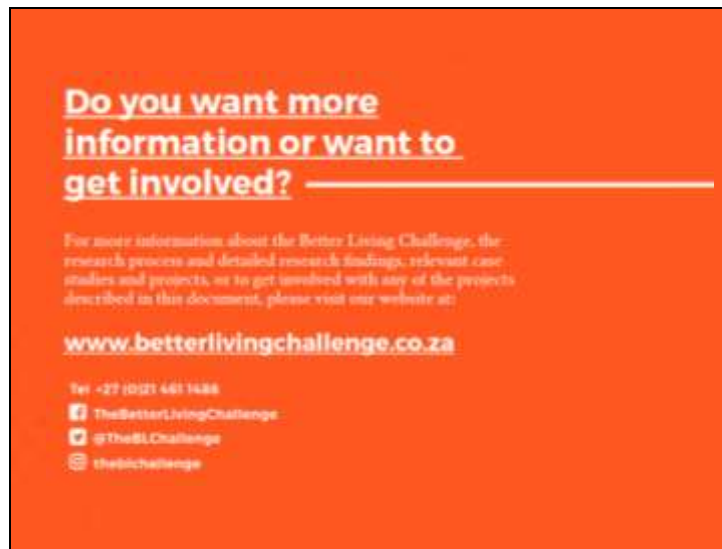
1. Empowerment and improved sense of agency
2. Trust-building and development of a shared understanding
3. Enhanced 'sense making', building connections and navigation of process
4. Tangible outputs
5. Cross-disciplinary collaboration and solution finding: for mutual gain.
6. Iteration, rapid prototyping to share and test ideas
7. Enjoyment factor



So having a little taste of how users have really guided the framing of the BLC, and the projects have been geared for knowledge sharing and piloting innovative solutions I'd like to touch on the value of a Design-Led approach.

Numerous papers and articles have been penned globally on the value of design or a Design-Led approach. When discussing value in the business world, it refers to specific benefits generated by a feature. Accordingly, the following benefits have emerged in the BLC specific to the South African context:

- **Empowerment and improved sense of agency:** participants in projects feel enabled to challenge existing assumptions, think radically, challenge preconceptions and the status quo. It promotes a shift towards feeling comfortable with complexity, and stimulates curiosity to navigate the unknown. Projects support the ethos of a participative design process that enables everyone to have a voice in the process
- **Trust-building and development of a shared understanding:** projects enable trust to be built, support efforts towards understanding the context, and promote shared understanding between designers and users.
- **Enhanced 'sense making', building connections and navigation of process**
- **Tangible outputs:** the process of distilling conversations, documents and activities into new artefacts (such as summary documents, drawings, charts, videos or objects) transforms complex information, systems and concepts into digestible formats for different user groups. helps make ideas concrete and easier to interrogate, while also encouraging participation and creative thinking.
- **Cross-disciplinary collaboration and solution finding:** the use of the Design-Led tools and methods support problem analysis and solution finding. Stakeholders with different, but complementary, skills work together for mutual gain.
- **Iteration:** projects allow for rapid prototyping to share and test ideas, reflection as part of an iterative process, as well as testing, refining and evaluating of ideas. Feedback loops enable corrections, clarifications and adjustments in a non-judgemental and non-defensive way.
- **Enjoyment factor:** making the design process an enjoyable experience enables those involved to move more easily into a co-creative frame of mind, leading to creative and enjoyable outcomes.



Hopefully this presentation has highlighted how innovation using Design-Led processes and thinking methodologies is key to address the imperative of the need for a broader, more collaborative, user-centered approach to problem identification and solution finding. - for systemic change.

Thank you.



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