DESIGNING WITH CRIME PREVENTION – CREATING COMMUNITY WELLBEING THROUGH DESIGN

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Abstract

This research examines a group of professional practitioners engaged in a reframing exercise on complex social problems. The research is part of a broader research question which is examining problem solving practices and the role of design in complex social problems. This paper reports on a workshop involving seven practitioners who were facilitated through the Frame Creation workshop methodology by the (anonymized) research team with the process documented for analysis. The findings illustrate the shifting of frames from a starting point of security or protection, to frames that are more open and able to address the broader issues surrounding the problems. The findings highlight the significantly different solutions that can be created by using a design process that focuses on human needs.

Keywords: Design practice, Design methodology, Design methods

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1   INTRODUCTION

This case study was motivated by an interest in exploring the differences and similarities in problem solving approaches between crime prevention practitioners using traditional frameworks within their practice and crime prevention practitioners when they are within a design methodology. The broader research includes examination of how crime prevention practitioners take on problems and how they present problems to others. This paper focuses on a part of the study that examines how crime prevention practitioners reframe their problems in a human centred design workshop. The workshop was developed by a transdisciplinary team in their work on crime problems at the Designing Out Crime research center (DOC) and other complex social problems at the Design Innovation research centre (UTS:DI) both at the university of Technology, Sydney (for more on this see (Asquith, Dorst, Kaldor, Watson 2013, Dorst 2013, Tomkin and Watson 2013, van der Bijl-Brouwer and Dorst 2014, Watson 2013).

1.1   Design for healthy life – community wellbeing

Crime can take a heavy toll on individuals, families, communities and society, and can be greatly detrimental to individual and community wellbeing (Mayhew 2003). In New South Wales, Australia, there are some 80 Police officers and more than 50 local government employees whose roles are either entirely or at least partly focused on responding to local crime issues and preventing crime. Their practice is supported primarily by what is known as Situational Crime Prevention, Problem Oriented Policing, or Crime Prevention Through Environmental Design (Ekblom 2011). Largely these practices seek to directly reduce opportunities for crime by addressing risk. While it makes sense that to reduce crime is to increase community wellbeing, it is important to consider the means by which crime is reduced. Countermeasures that target the crime directly can actually be counter-productive (Wortley 1996) and lead to increased feelings of unsafety; for example, Cozens (2013) outlines how the use of roller shutters on residential windows intended to reduce burglary actually decreases the sense of safety on the street outside.

Crime prevention practitioners often deal with a wide variety of problems in their roles (see for example Clancey 2012). These problems range in complexity, from street crime such as graffiti and assaults, to residential burglary, sexual assault and family violence, to programmes that address precursors to extremism. With a variety of types of problems, it is important that practitioners are supported in their work with a range of problem solving approaches. The dominant approaches within crime prevention practice have been roundly criticized for oversimplifying responses to crime (Ekblom 2011). Sociologists have noted that responses to crime problems by governments can be at odds with the significant cultural aspects of life (Arvanitakis 2013) and that governments are working in an environment of 'complexity without direction' (Boutellier 2011).

In this environment of complexity there is a growing discussion about the fruitfulness of design as a way of approaching complexity (see for example Brown 2009). There is a small but growing academic discourse outlining frameworks in which this might be fulfilled (see for example Dorst 2013, van der Bijl-Brouwer and Dorst 2014) and a larger volume of published examples of design being applied to complex crime problems (see for example Lulham et al 2012, Camacho Duarte et al 2012, Dorst 2013, Thorpe and Gamman 2012).

This paper investigates how crime prevention practitioners can find new frames for their problems when facilitated through a design process.

2   METHODOLOGY

This research was guided by the questions:
1.   How do crime prevention practitioners take on problems?
2.   How do they present problems to others?
3.   How, when placed within a design process do they create new frames though which to approach the problems and generate potential solutions?

The broader study examines each of these questions with this paper focusing on the third question.

2.1 Data collection

Seven representatives of 6 local governments were selected through an expression of interest process to participate in the University of Technology, Sydney (UTS) project fair. Each participant was sponsored by their organisation to participate in the process and further supported to implement solutions that come from the process. The projects will be developed into briefs and pitched to an audience of social designers, educators from UTS who are looking for real world problems to apply research and teaching resources to, and a broader audience of professionals who wish to add their resources to contributing to solving complex problems.

The local government practitioners were invited to submit a problem brief from their organisation. The brief asked the following questions;

1. What is the problem? What is the situation you'd like to fix, and why?
2. What has your organisation done already (if anything) to solve this problem? Tell us something about the history of your problem. Have you or others in your organisation tried to fix it? Can you briefly outline the results of previous efforts?
3. What resources are likely to be available to implement or trial a solution? Assuming the project generates a fruitful concept, what will you do to help bring that idea to life? How will you make it happen?

The workshop, developed by DOC, explicitly follows the first seven steps of the Frame Creation process (Dorst 2015). Word maps and sticky notes were used to capture the output of these steps, and these artifacts were then recorded via photographs.

2.2 The frame creation workshop

The practitioners and their organisations are de-identified in this paper, with the focus being on the application of the frame creation workshop on the cases. In the workshop were seven participant practitioners and four professionals from DOC, including the two authors of this paper. In the first half of the one-day frame creation workshop one of the practitioners was selected to have their case examined by the whole group. Working closely through this case as a group provided an introduction to the frame creation workshop, as well as providing broad inputs from all participants on this problem brief.

The remaining five problem briefs were explored in the second half of the day with the practitioners matched with the professional staff at DOC. The problems submitted were diverse, and are outlined in more detail in the following section. For the purpose of this paper they are described here as: the cemetery, the town centre, the mail, the shopping centre and sports field, the parkland, and the library.

The aim of the workshop is to gain deep human insights into the problems at a thematic level, since it is from these new thematic understandings that new frames are generated opening up new solution spaces (for further discussion on this see Dorst 2015, van der Bijl-Brouwer and Dorst 2014, and Dorst and Tomkin 2011).

Figure 1. The frame creation workshop

3 THE RESULTS

Each case study is briefly described as it was presented in the workshop by participants with the results of the tools summarized in van der Bijl-Brouwer-Brouwer and Dorst's four-layer model of insights into human needs for design and innovation (2014).

The model shows on the left side, how the problem was framed coming in to the workshop. Starting with current solutions the workshop seeks to understand the current scenarios, goals and themes. This understanding was reached through analysis of the expression of interest document as well as from the initial tools as deployed in the workshop. Following the identification of these elements of the current frame, the new themes, frames, goals, scenarios, and solutions are gradually created and are illustrated in each of the four layer models below.

3.1 The cemetery

The cemetery is a small historical cemetery in a semi-rural area on the outskirts of a large city. There are around 60 graves at the cemetery, some dating back to 1814. Recently there has been vandalism of some gravestones causing concern in the community. The reaction to this vandalism was to erect a security fence around the cemetery, which is locked at night, and to install CCTV. Local folklore, particularly among young people, tells that the cemetery is haunted; as such it is popular on Halloween and generally among young people.
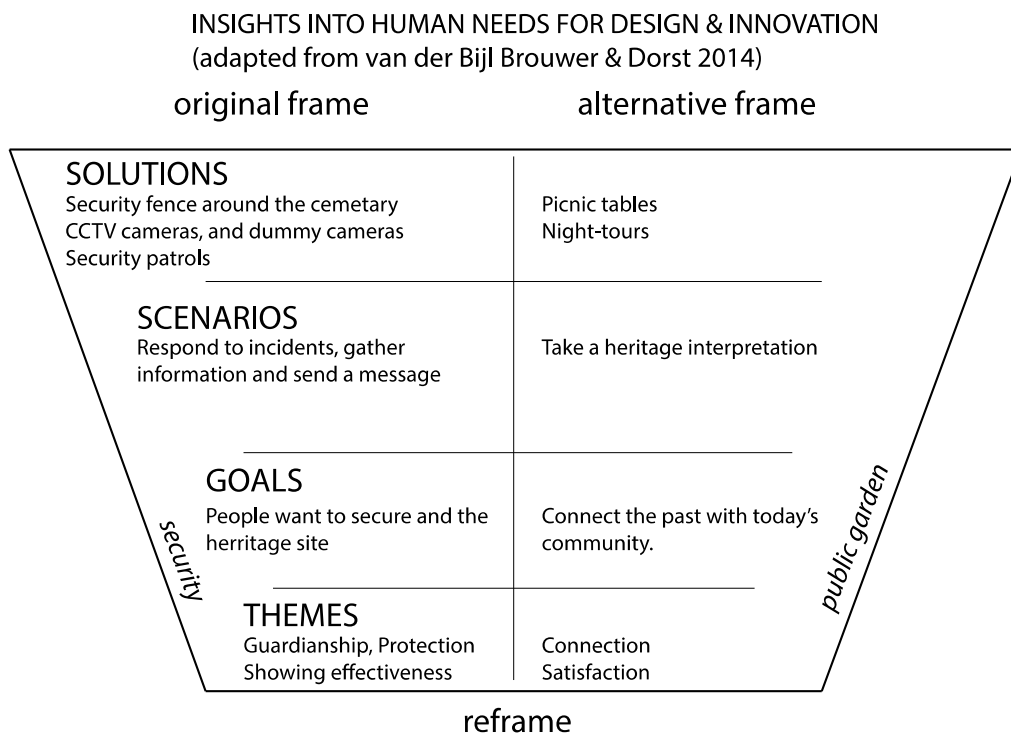

Figure 2. Four Layer Model – The Cemetery

The initial problem frame was one of security, with the themes of guardianship, protection, and being seen to be effective emerging from the analysis of the problem as it was presented. On the right side of figure 2 is the new frame (created through workshop tools that are not outlined in this paper), the themes through which it was created, the goals it aims to achieve, the scenario through which it will achieve these goals and lastly, at the top of the right side, the solutions.

3.2 The town centre

The town centre was fitted with several dozen CCTV cameras as the result of a government grant and the local government is seeking funding to install more cameras. Anecdotal evidence suggest that the cameras are effective in reducing crime, however it is also felt that there may be spatial displacement

(Eck 1993); that is, potential offenders will move to a location in the town centre that is unobserved in order to carry out their crime.
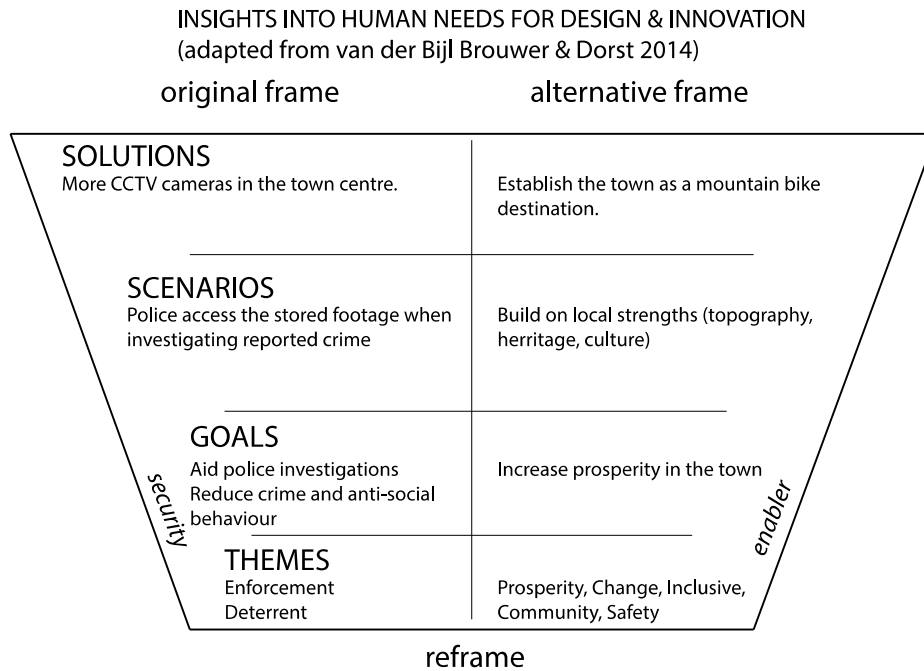
INSIGHTS INTO HUMAN NEEDS FOR DESIGN & INNOVATION
(adapted from van der Bijl Brouwer & Dorst 2014)

original frame   **alternative frame**

SOLUTIONS
More CCTV cameras in the town centre. | Establish the town as a mountain bike destination.

SCENARIOS
Police access the stored footage when investigating reported crime | Build on local strengths (topography, herritage, culture)

GOALS
Aid police investigations
Reduce crime and anti-social behaviour | Increase prosperity in the town

THEMES
Enforcement
Deterrent | Prosperity, Change, Inclusive, Community, Safety

security   enabler

reframe

Figure 3. Four Layer Model – The Town Centre

3.3 The mail

In a beachside suburb there is a problem with fraud. Credit cards are being stolen from mailboxes and then used to purchase goods online and in shops. The fraudulent use of the cards is only reported to police 37 per cent of the time (ABS 2012), and add up to millions of dollars worth of fraudulent transactions. The banks absorb the loss and refund their customers, or in some cases the vendor takes the loss. A proactive local government is looking for ways of stemming this problem.
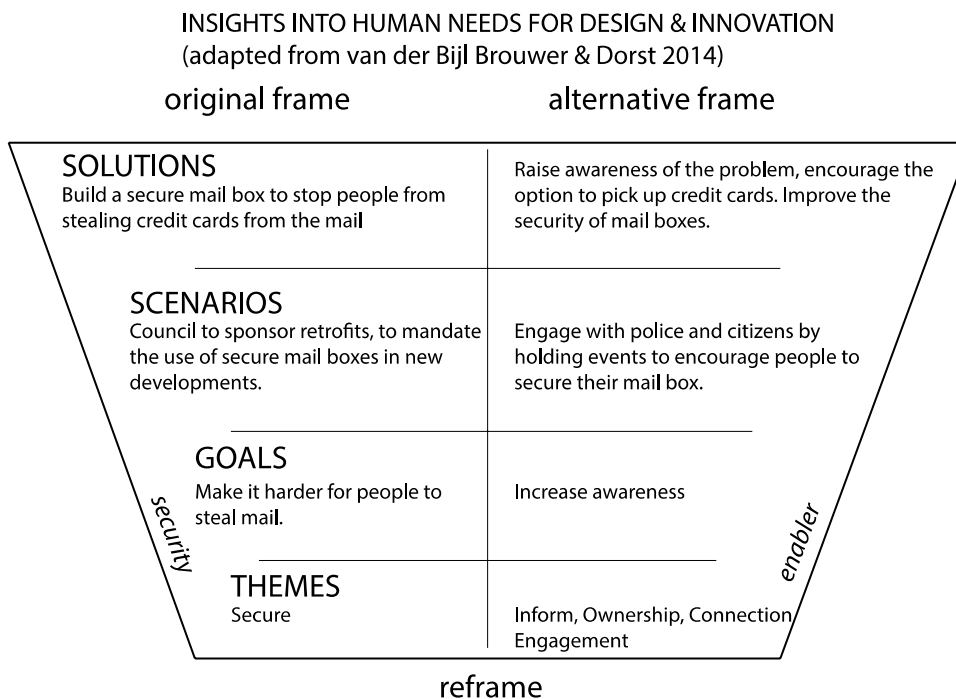
INSIGHTS INTO HUMAN NEEDS FOR DESIGN & INNOVATION
(adapted from van der Bijl Brouwer & Dorst 2014)

original frame   **alternative frame**

SOLUTIONS
Build a secure mail box to stop people from stealing credit cards from the mail | Raise awareness of the problem, encourage the option to pick up credit cards. Improve the security of mail boxes.

SCENARIOS
Council to sponsor retrofits, to mandate the use of secure mail boxes in new developments. | Engage with police and citizens by holding events to encourage people to secure their mail box.

GOALS
Make it harder for people to steal mail. | Increase awareness

THEMES
Secure | Inform, Ownership, Connection, Engagement

security   enabler

reframe

Figure 4. Four Layer Model – The Mail

3.4 The shopping centre and sports field

In a suburb of a small city there is a shopping centre that attracts people from across the city and from neighbouring large towns. Across the road from the shopping centre there is a sporting field that is used by sporting clubs and the public. On Thursday nights the shopping centre has extended trading hours and attracts shoppers and young people from the surrounding areas. Some young people come to the shopping centre and hang out in the sports field. The amenities block of the sports field has been routinely vandalised and as such is now 'fortified' and treated with graffiti protectant.
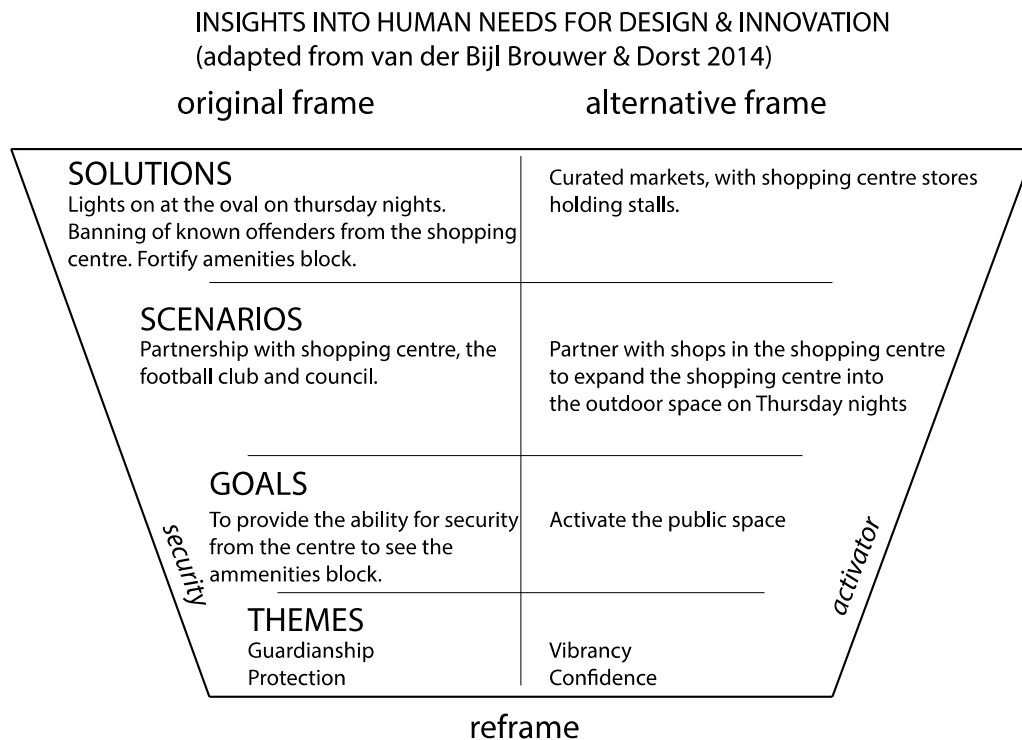
INSIGHTS INTO HUMAN NEEDS FOR DESIGN & INNOVATION
(adapted from van der Bijl Brouwer & Dorst 2014)

original frame   alternative frame

SOLUTIONS
Lights on at the oval on thursday nights.
Banning of known offenders from the shopping
centre. Fortify amenities block.

Curated markets, with shopping centre stores
holding stalls.

SCENARIOS
Partnership with shopping centre, the
football club and council.

Partner with shops in the shopping centre
to expand the shopping centre into
the outdoor space on Thursday nights

GOALS
To provide the ability for security
from the centre to see the
ammenities block.

Activate the public space

security   activator

THEMES
Guardianship   Vibrancy
Protection   Confidence

reframe

Figure 5. Four Layer Model – The Shopping Centre and Sports Field

3.5 The Parkland

In a suburb of a large city there is a town centre and a nearby parkland that is undergoing change. There has been investment in the parkland to establish new facilities for a growing population in this part of the city. There is concern over the safety of pedestrians moving from the town centre to the parkland, with no clear and safe connection, the safety and viability of the parkland is itself threatened by a lack of use. The town centre is also in the midst of change, moving from a retail and commercial centre surrounded by low to medium density residential, to one which will include high density residential zones. The current approach is to conduct safety audits of areas that may be unsafe, and to implement changes such as improved lighting and landscaping, to increase natural surveillance and to remove targets of vandalism such as toilets, bins and other infrastructure. While there is nothing wrong with these approaches, and some traditional crime prevention approaches do aim to generate greater use of a space, this application does limit the solutions somewhat and misses the opportunity to create experiences that encourage people to use the connectors, rather than just to limit the potential damage from misuse. This perhaps characterises the use of traditional frameworks, in that largely they come from a starting place of reducing risk, rather than creating value.

original frame   alternative frame

SOLUTIONS
CCTV program, high visual penetration,   Enhanced connections between the town centre
lighting, landscaping.   and the parklands.

SCENARIOS
Conduct precinct wide community   Create precinct wide connectivity
safety audits strategy. Identify risks and   strategy.
adress them with countermeasures.

GOALS
To increase pedestrian safety on   Activate the public space
connecting paths between the
town centre and parkland.

THEMES
Guardianship   Connection

security   *connector*
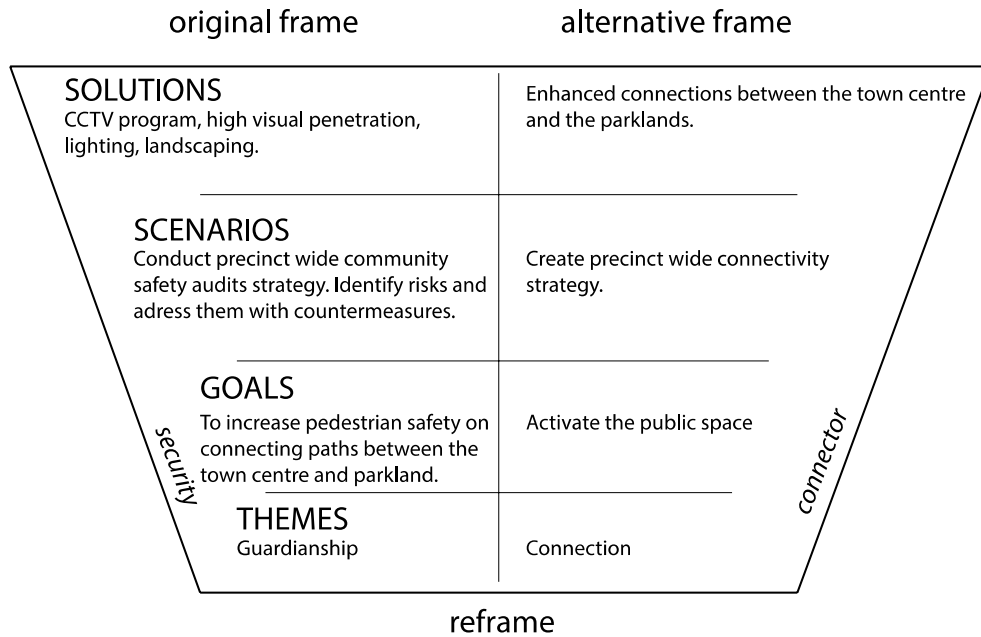
reframe

Figure 6. Four Layer Model – The Parkland

3.6 The Library

The case studies so far have illustrated the reframing of problems based on new insights into themes. In the final case study we go into more detail describing the case study and the way that the themes helped shift the original problem frame into one that was more solvable.

The Library project presented as a complex problem. As described by the practitioner the library is located behind a row of shops on one side, behind a row of houses on another, a car park and early childhood centre on the third side, and on the fourth is neighboured by a park and swimming pool. The library is gratified weekly and council cleans it of graffiti regularly, sometimes more than once a day. The windows of the library were regularly smashed from the outside until council fitted security grilles over the windows. In early 2014 the library was broken into, the window smashed from the inside and seriously damaged by fire. It was closed for a few months to undergo repairs. While the repairs were taking place the site was damaged at night until council hired a security guard to protect the site. The security guard was so threatened by the people who were damaging the library that he started to bring a guard dog along for protection. When the library was reopened it had grilles on all of the windows, and shutters on all of the doors.

There have been no charges laid for the persistent damage on the library. In talking with the practitioner about the library it is clear that there are complex problems at play in the local community. The solutions implemented in response to the damage to the library do not seek to address these complexities; rather they are intent on protecting the infrastructure so that people in the community can use the library.

The frame innovation workshop (see, for a more detailed description, van der Bijl-Brouwer & Dorst 2014) mapped the archaeology of the problem and identified stakeholders who have been involved in solving the problem, as well as stakeholders who could be involved in a solution. Thematic analysis of a sample of these stakeholders (retailers, residents, Muslim community, library, council, community centre) showed common themes of pride, identity, ownership, belonging, quality of life and safety. Of these the practitioner believed that pride and ownership were the key themes. Subsets of these themes were culture, family, and diversity. It was recognised that the emerging themes could be arranged in a cycle, and when applied to the library site there was a break in the cycle that was stopping the development of a sense of pride and ownership in the suburb and in turn the library (see Figure 7).
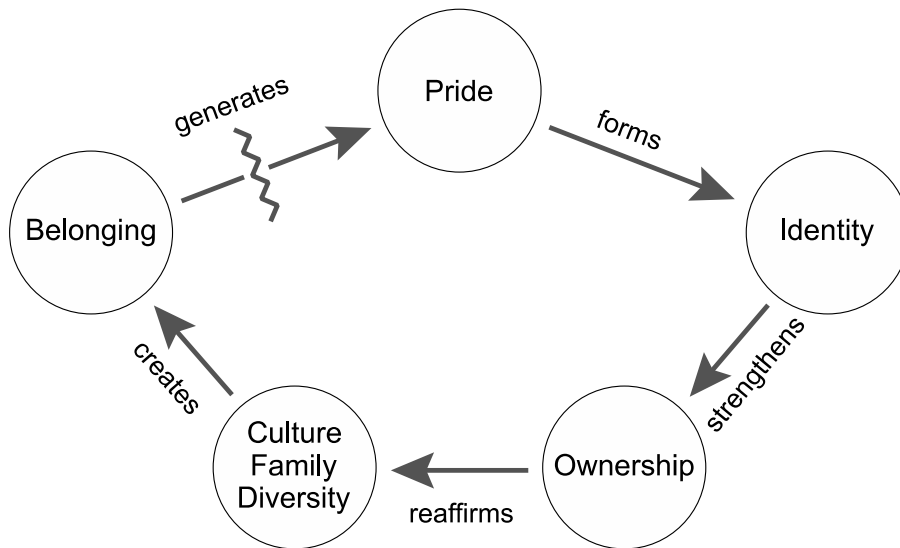
Figure 7. The broken cycle of belonging

Through a discussion of how these themes interrelate in the Library case, it was recognised that there was a break in the cycle between 'sense of belonging' and 'pride'. Having identified this, the question became 'how to create pride in the space?' This was explored through further investigation of the theme elements (see Figure 8).
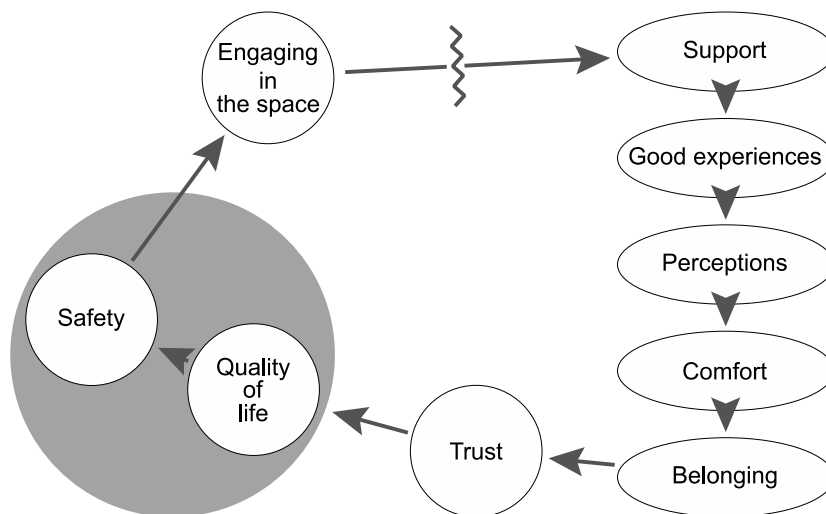

Figure 8. The engagement cycle

With the problem frame moving from one that would protect the site, to one that would create pride and ownership the solution frame for council moved from a provider of security, to a curator of pride and ownership. From these newly recognised themes, and this new frame the goals, scenarios and solutions shifted radically and are outlined in Figure 9. It is this deeper analysis of the themes, and their interrelationship that sets a design led approach apart from the traditional crime prevention practices, the latter of which seek to address risks at the solution level, rather than to create value at the thematic level through solutions that make a place safer.
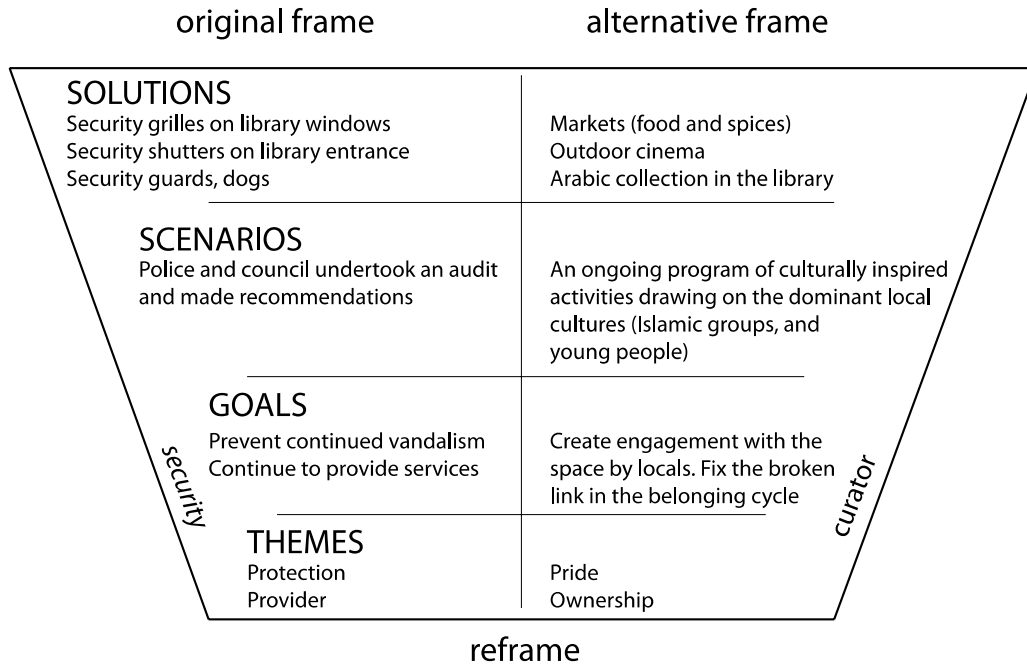
INSIGHTS INTO HUMAN NEEDS FOR DESIGN & INNOVATION
(adapted from van der Bijl Brouwer & Dorst 2014)

original frame   alternative frame

SOLUTIONS
Security grilles on library windows   Markets (food and spices)
Security shutters on library entrance   Outdoor cinema
Security guards, dogs   Arabic collection in the library

SCENARIOS
Police and council undertook an audit   An ongoing program of culturally inspired
and made recommendations   activities drawing on the dominant local
                                             cultures (Islamic groups, and
                                             young people)

GOALS
Prevent continued vandalism   Create engagement with the
Continue to provide services   space by locals. Fix the broken
                                             link in the belonging cycle

THEMES
Protection   Pride
Provider   Ownership

reframe

Figure 9. Four Layer Model – The Library

4 DISCUSSION

This research provides a case study of the application of the Frame Creation workshop on problems that are usually dealt with through crime prevention frameworks. The discipline of criminology which informs crime prevention practice have traditionally viewed engineering and design as disciplines only concerned with making physical things. The research discussed in this paper feeds into broader research questions around on how practitioners take on complex problems in their professions and how design can contribute to their problem solving approaches. This particular element of the research examined how a human centred design approach (Frame Creation) is used by professional staff from DOC with crime prevention practitioners to reframe problems.

The results show that in every case the original solution frame of 'security' was able to be reframed into a more open frame based on deeper insights into the human values at play. Moving from the themes of 'protection', 'provider', 'guardianship', enforcement', 'deterrent', 'showing effectiveness', and 'secure' to themes of 'vibrancy', 'confidence', 'pride', 'ownership' 'connection', 'satisfaction', all themes that were identified through analysis of what is important to stakeholders placed the practitioners in a more fruitful problem frame. We can see in the detailed Library case study that the solution directions are aimed at mending 'the broken cycle of belonging', rather than solely protecting built infrastructure.

It may be that a combination of problem solving approaches should be used on complex problems. Certainly it is long established that rational problem solving approaches are no good for complex problems (Dreyfuss 1992). There is a growing number of problem solving approaches emerging from observation of practice that can be shared with the broader problem solving community. In a world that is struggling to deal with the complexities it faces, we as a community of engineers, designers, scientists, academics, and practitioners, can also apply and share our own approaches with people from other fields in hope that they can be useful.

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