

# DESIGN CHARRETTE: A VEHICLE FOR CONSULTATION OR COLLABORATION?

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## ABSTRACT

As a model of participation and creativity, the *design charrette* has huge potential for reshaping the engagement of design professionals and the dynamic processes available to businesses and organisations seeking ongoing innovation. Design charrettes in their current form largely remain the preserve of design firms, used both for internal project analysis and synthesis of large volumes of complex information. Charrettes are most often used as a consultant tool for engaging the community in participatory workshops on potentially controversial developments.

Taking the format of charrette as developed in the field of planning and urban design, this paper will reflect on the *enquiry by design process* and explore the potential of stimulating *innovation through drawing* as a way of collaborating with stakeholders outside of the key design professions.

Development, facilitation and analysis of a student workshop explores abstracted principles of a design charrette and indicates possibilities for more open, inclusive and holistic engagement between design professionals as *consultants* and others as *collaborators*.

## INTRODUCTION

Innovative companies and organizations acknowledge the importance of engaging with creativity, not just to generate new products or services but as a way of planning and developing their business ecosystem. Methods such as rapid prototyping, brainstorming and

mind-mapping are now relatively well-known tools for encouraging internal creativity, although they tend to be diverging ideation tools rather than tools that enable more focused decision making through convergence. The design charrette is a tool capable of both.

It is becoming more usual for organizations to out-source for creative input, rather than retain staff trained in areas such as graphic design, advertising, uniform design, interior design/shop fit-out services. Design consultancy services are an especially attractive option where external stakeholders are heavily involved, sometimes using it as an opportunity to build a profile of exclusivity through using a renowned figurehead, or more often to satisfy pre-determined requirements while ensuring deliverables are limited to a specific budget and timescale.

Taking as an example the building industry, while some developers may have in-house designers, they typically engage separate planning, master planning, urban design or architectural consultants for more complex or large-scale multi-faceted projects. Most of these projects follow a normal consultancy service arrangement where the design company enters into a direct agreement with a client for the provision of a service, sometimes in limited collaboration with other parties appointed by the client (such as engineers, quantity surveyors, builders). Where a development project impacts on planning legislation or proposed considerable changes in the community infrastructure, the planning and design process can potentially take several years. It is in this situation that an inclusive method for accelerated decision-making and generating constructive multi-party outcomes becomes a very attractive proposition.

This paper explores the current format of the 'design charrette' as a consultant design tool with a view to applying the method in more participatory and innovative ways, and across wider fields of operation. Re-thinking the integration of professional design skills with normally unrelated business fields will help move towards the more effective modelling of collaborative, innovative and creative processes and outcomes.

## PART 1: DIVERGENCE

This investigation presents a brief cross-comparison of case study examples illustrating current charrette systems, and outlines a prototype ‘Participatory Innovation Charrette’ (PIC) action experiment recently conducted by the author. The PIC opens up opportunities for those with expertise in design, conceptual thinking and drawing, and participatory design research knowledge to engage with charrette influenced creative facilitation as a useful tool. It is hoped this paper demonstrates it is possible to build a method for furthering knowledge about collaborative and inclusive idea generation in sometimes quite disparate groups, and also as a way of moving towards the aims of Australia’s National Innovation System:

*“We need to find ways to increase innovation performance across the economy, to ensure business has better access to new ideas and new technologies and to bridge the divide between industry and research... In today’s economy, innovation policy is industry policy.”* (Senator the Hon Kim Carr, 2008)

Finally, initiatives for moulding professional design services towards more innovative and participatory behaviour in contrast to the current ‘exclusive’ design consultancy format will be reviewed for their applicability within the wider community; businesses, organisations and institutions. The author closes by introducing possibilities for a new model of active engagement linking design, industry and research; the Business Model Innovation Charrette (BMIC).

### 1.1 L’ORIGINE DU CHARRETTE

The word *charrette* is thought to originate from the word for cart in French, ‘le chariot’, with specific reference to a push cart that travelled the streets of 19th century Paris collecting the student artwork and architectural illustrations. University officials, or proctors, were responsible collecting the final work and returning with it to the exclusive architecture school, École des Beaux-Arts (Wallace 2000). Students used ‘en charrette’ to describe the process of literally drawing at the last minute on the school vehicle carrying their final submission to the professors (National Charrette Institute 2001).

The architecture faculty of the school would issue problems that were so difficult few students could successfully complete them in the time allowed... Students would throw their drawings into the cart at various stages of completion, because to miss the cart meant an automatic grade of zero (Condon 2008, 1).

The term charrette has been used since then to indicate a period of intense last minute work towards a design presentation deadline, and remains almost exclusively associated with the disciplines of architecture and planning. Collaboration and efficiency are at the centre of this process, most often through a series of studio sessions or intense workshops. These act as generative spaces for groups of designers aimed at achieving a

drawing-based outcome in a short period of time. The contemporary interpretation of charrette is somewhat distant from its French origins (Figure 1); there is no evidence the Parisian students worked in collaboration as is typical of the design teams engaged in the charrette ‘event’ today. Additionally charrettes occur mostly outside of the academic environment.

*“In the mid-1980s in a nod to the creative activity of the architecture students, community development planners adopted the name [charrette] to describe interactive, multiday community planning sessions.”* (Lennertz and Lutzenhiser 2003, 4)

However, the core skill required to work *en charrette* remains the central and most critical of requirements for a successful charrette; the creative ability for communicating design concepts on paper and *drawing at the last minute...*

### 1.2 DESIGN CHARRETTE: CHARRETTE PROCESS

The type of charrette popular in Australia, USA and UK is less about individual achievement or academic education, and mostly about working in collaboration with others on projects that involve design input (Figure 1). There is still an element of education with the transfer of information between the stakeholders, and projects engaging with public consultation permit the exchange of knowledge (local and specialised) and views.

| Key Features:            | Le Charette:   | Design Charette:  |
|--------------------------|--|---|
| Output and process       | Drawing submission reached through:<br><br>Academic research + design        | Drawing submission and supporting documents (e.g. reports) reached through:<br><br>Knowledge dissemination, sharing views and visions, discussing options, seeking consensus + design |
| Communication tool/skill | Drawing + improvisation  | Drawing + improvisation, plus support documents and multi-media capability  |
| Design skill level       | Basic/novice:<br><br>Academic as educator; student skills under development. | Professional/expert:<br><br>Designer as key educator and facilitator; non-design trained stakeholders (public, other professionals)   |
| Participant/event        | Individual:<br><br>Student/private or closed situation                       | Collaborative:<br><br>Mixed technical and non-technical participants/public and group situation   |

Figure 1: Comparison of the original and current form of charrette

The main intention for organising a charrette is to compress the time taken to consult with various stakeholders, especially in the current climate of urgency and instant data exchange. Consultation is traditionally a lengthy and costly linear or ‘sequential’ process, frequently taking several years on a complex project, by which time original survey material may be outdated, and key decision-makers may have moved on. A further aim of the charrette process is that of risk reduction. The relative transparency created through bringing the key stakeholders together at one time, in one place, allows for “open and constructive discussion... shared project understanding and sense of ownership” (Day 2010, 1). This face-to-face contact is seen to reduce the likelihood of delays and difficulties arising from unforeseen issues, stakeholder resistance, poorly communicated intentions and conflicting survey data. Reference to the charrette process frequently ignores some of the important wider educational and research aspects of community engagement, and instead focuses on one ‘time-limited’ event, a ‘problem-solving’ workshop around a single project focus and with select stakeholders (Condon 2008, Lennertz and Lutzenhiser 2003, McLaughlin 2002, Musty 2010, Sutton and Kemp 2006). A typical charrette event has been described by the Charrette Centre Inc (USA) as: “An intensive, multi-disciplinary design week-long design workshop designed to facilitate open discussion between major stakeholders of a development project. A team of design experts meets with community groups, developers and neighbours over a period from 3-4 days to 2 weeks long, resulting in a clear, detailed, realistic vision.” (Schommer and Musty 2003).

#### Design Event Method

In order to facilitate the organisation and operation of a charrette ‘event’, the Victorian State Government Department of Sustainability and Environment (DSE) has produced basic guidelines promoting the use of ‘engagement tools’, and outlining the usual resources and requirements. Design consultants organise a community/stakeholder events along the lines of a charrette quite infrequently, and only on specific and often large-scale projects that require community engagement. Some companies or organisations develop their own model of charrette-type process and event, such as Robert Days’ ‘Planning Design Forum’ (Case Study1) in Australia, or the licensed ‘NCI System’ as developed by the National Charrette Institute in the USA (Case Study 2). The charrette differs from other planning processes in many ways, particularly in the predominant use of “maps, graphics and place-related tools as opposed to policy documents” (Lennertz and Lutzenhiser 2003, 8). No two charrettes are ever the same due to the context specific nature, but they do generally have a common format and follow the same three basic steps:

1. Gathering information
2. Design event
3. Implementation

According to the Charrette Centre, there is an “infinite schedule [of] combinations that can be used” to organise the activities of the design event. The Centre does, however, recommend a minimum of four days for a “charrette that will generate a usable level of detail worth the investment of time” (Musty 2010). Two industry-based case studies will illustrate different types of schedule; one is led by the specific nature of each project, and the other by a licensed system.

#### Participation & Innovation

Participation in a design event means that non-related parties are encouraged to come together in one location, exchange views and expertise, and from there forge new understandings in a generative and creative space. To create an effective participatory *design* event, stakeholders need to be included throughout the design process so building a collective knowledge base, and confidence in their collective decision-making ability. Also critical is the focus on ‘design’ as the mode of knowledge transfer and communication, hence the designer needs to be central to the process (Figure 2).

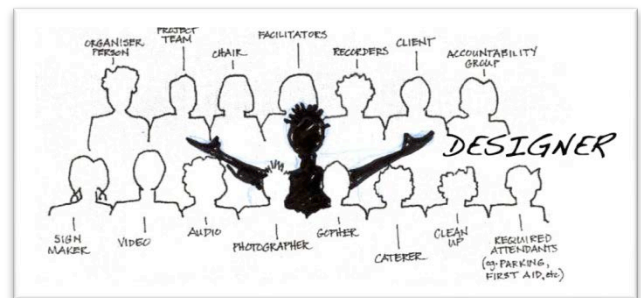


Figure 2: Community participation event becomes a design event (designer added by author) Source: (Sarkissian, Cook, and Walsh 1994, 27)

At this level the stakeholders, whether they are technical experts, experienced members of the local business community, or informed individuals from the general public, become empowered as a group to ‘give form’ to their own visions and interests (Garde and van der Voort 2010). In effect, the properly conducted participatory design event can become a ‘co-creation’ experience, however, in practice this is not always feasible given the time constraints and specific nature of the project based agenda. Co-creation as defined by Sanders and Stappers as an “act of collective creativity shared by two or more people, [and] applied across the whole span of the design process”, lends itself to a more idealised or abstracted charrette model, perhaps relying less on discipline specificity (Hamid and Choi 2010; Sanders and Stappers 2008). Too often the ‘participation design process’ is reduced to a few open group discussion workshops and late night closed design and drawing studio sessions. The addition of design expertise in the open workshops transforms a community participation process (Figure 3) into an interactive design event, using tools such as narration; cooperative tasks and participatory design exercises (Sarkissian, Perlgut, and Ballard 1986; Sarkissian, Cook, and Walsh 1997).

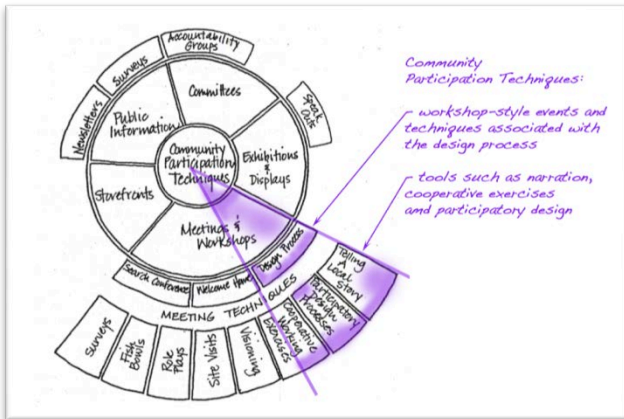


Figure 3: What is Participation? (adapted from original) Source: (Sarkissian, Cook, and Walsh 1997, 23)

By moving the focus from a real world location and releasing the participants from the site-planning objective, the design event process could quite realistically provide an opportunity for organisations to engage with participatory innovation through the design charrette. The Fast + Furious Forum (Section 2.4) experiment and Business Model Innovation Charrette (Section 3.2) proposal will address the advantages of opening up the model to new fields of application as a way of increasing participation in, and contributing to innovating-generating processes (Buur and Matthews 2008).

The likelihood for innovation here is anticipated through a bringing together of participants from broadly diverse backgrounds. It should be noted that in some situations, methods such as visioning, narration and participatory design processes are referred to as ‘meeting techniques’ (Figure 3), however, ‘tools of engagement’ is a more fitting description of their applicability.

### 1.3 DESIGN CHARRETTE: A DESIGN PROCESS

The DSE describes the design charrette as a *highly innovative* tool for effective engagement, generating a *medium* level of participation on their relative scale comparing tools. Of the sixty-eight tools listed by the DSE, the ‘design charrette’, ‘mind mapping’ and ‘sketch interviews’ are the only three that fully utilize drawing as a key part of the engagement process. Mind mapping and sketch interviews are both diverging tools that generate information and ideas, whereas the design charrette expands stakeholder horizons before bringing together the complex web of information into a coherent format. This capability for divergence is important for enabling stakeholders to come to a decision on a course of action or come to a solution. It is this ability to explore and then bring together an infinite number of possible scenarios and variables makes the design charrette process so valuable on complex projects, and at the heart of the process is the key ingredient; people who are skilful at designing and drawing.

Patrick Condon highlights the importance of the word ‘design’ in his book ‘Design Charrettes for Sustainable Communities’ and clarifies: “Design charrettes are not planning exercises... Where linear methods become paralysed in the face of multiple variables, design is comfortable...” (2008, 12). The author points out that it is important for people involved in the charrette to engage with design, regardless of any lack of formal design training, supporting the view that creativity is a fundamental human trait (Csikszentmihalyi 1996). The author does however also make reference to the superior drawing skills of talented designers, which is somewhat in conflict with this forgiving statement:

*“Design is more a way of thinking than a specific set of technical skills. Design is a state of mind in which ambiguity is accepted... The design process is... necessarily and inherently qualitative, depending on intuition and judgement to select from alternatives. Intuition and judgement, by their nature and by definition, are inherent human qualities as opposed to acquired skills.”* (2008, 58)

Condon describes two kinds of charrettes that in many cases are combined into one. Generally they both require the same high standards of design and drawing skills and similar resources: *Visioning* charrettes produce speculative illustrations of what a future would look like, while *implementation* charrettes produce more directly applicable plans for change.



Figure 4: Design ‘experts’ in drawing mode (Roberts Day)

Drawing is not only a visual aid to design problem solving, but also an important method of “communicating with the other participants during the charrette” (Figure 4). Drawings generate knowledge that is immediately visual and accessible to a wide audience, and in a way that other digital visualising media cannot compare (Bailey and Gardiner 2010; Schon 1983):

*“Drawings create an inclusive atmosphere of collaboration akin to face-to-face conversation... But “conversing” with drawings is a rare skill. The ability to conjure images while still negotiating with teammates over this or that option already borders on the miraculous, but [they] must also be patient and work well with others... [while] articulating the basic framework for charrette choreography: the ‘talk, doodle, draw’ sequence.”* (2008, 19-21)



While rapid hand drawings take the centre stage at a charrette event, other types of ‘visualisation tools’ are used alongside sketches to explore project development. These include printed maps, plans, sections, perspectives, aerial views and elevation images. In addition, as digital media becomes increasingly part of our every day lives, graphic presentation methods including photomontage, PowerPoint, video, Skype and social networking media also help to convey information in a non-verbal form:

*“Words alone are endlessly forgiving. It is far too easy to say... how we might accomplish this or that... goal. When a designer can... listen to critique, cross out lines and put in other ones... massaging the form into... [a sketch] that becomes a consensus approval – that is the defining moment in any charrette.”* (2008, 19)

Rapidly produced hand drawings are seen as “critical outputs” to the decision making process, “irreplaceable”, and “the core... of the well-run charrette” (2008, 19). It is suggested that the drawings produced collaboratively must be regarded as a ‘contract in pictures’ rather than words; an agreement centred on shared interests and visions. One of the ‘nine key rules’ or guidelines for a good charrette is ensuring all drawings produced, however unresolved, must remain unchanged post-event. The drawings record and document the event and “embody the consensus arrived at by the charrette team” (2008, 67). If altered without approval of the entire team, they no longer represent the consensus view.

## PART 2: EXPLORATION

Case study #1 (Section 2.1) demonstrates a formulaic approach to tackling planning projects that has potential for application in other design fields. Case study #2 (Section 2.2) demonstrates a more rigorously systemised and licensed format for tackling complex projects that has potential for application in other design fields, and for commercialisation of the process.

The experimentation exercise (Section 2.4) demonstrates a structured but more free form approach to group engagement utilising ‘novice’ drawing and design skills, that has potential for application in other design fields, organisations, and other participatory situations such as with IU collaboration.

### 2.1 CASE STUDY # 1: PLANNING DESIGN FORUM

The first example of a design charrette is a *project specific* format developed by Roberts Day, an Australian urban design and town-planning consultancy. The Roberts Day Planning Design Forum (PDF) is an “interactive series of workshops”, effectively the design event, which is “embedded in a larger process” covering the information gathering and implement stages either side of the forum. The process is flexible and project specific, generally allowing 3-6 days for the PDF (Figure 5) after a variable period (around 8 weeks) of pre-forum analysis.

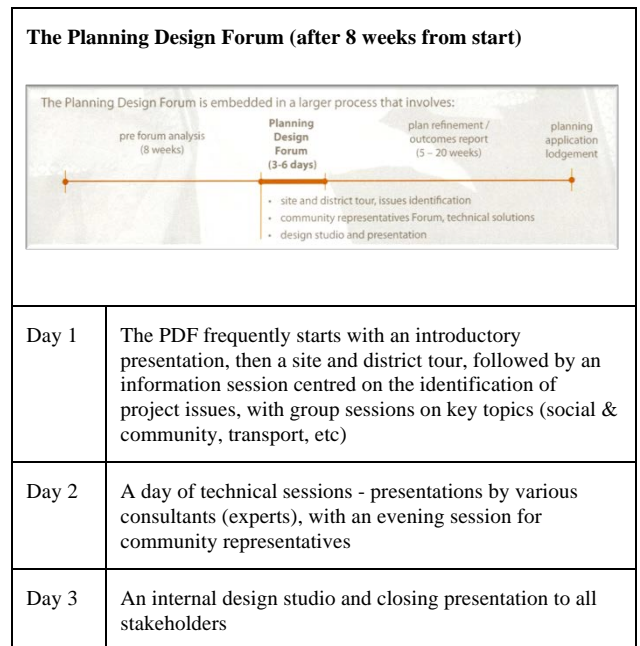


Figure 5: The Roberts Day PDF model

### 2.2 CASE STUDY # 2: NCI CHARRETTE SYSTEM

The National Charrette Institute (NCI), based in Portland, Oregon, has developed a licensed ‘Charrette System’ (NCI CS), “the breakthrough planning tool for community transformation” (National Charrette Institute 2001), which combines intensive design sessions with a collaborative public workshop. The NCI Charrette event takes place after a much longer time than the PDF, and follows a set structure lasting 6 days (Figure 6).

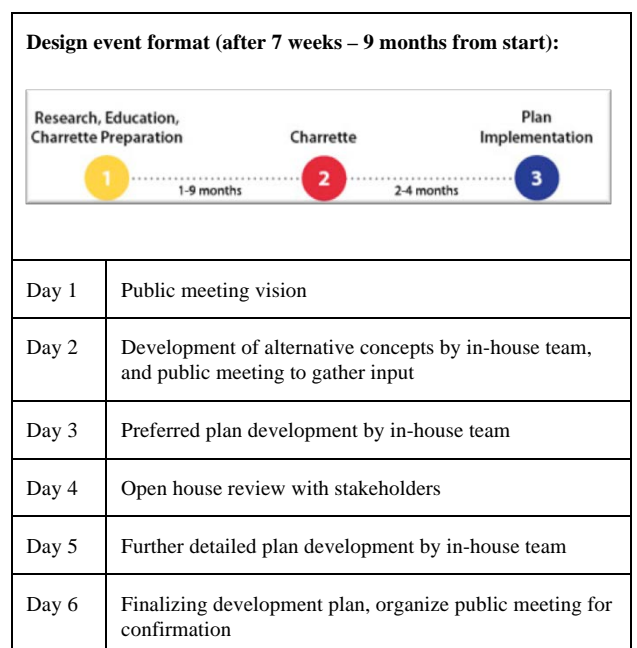


Figure 6: The National Charrette Institute model (NCI CS)

### 2.3 CASE STUDY COMPARISON

The models differ in their use, the nature of facilitation and the level of primary control maintained by design teams. The NCI system goes beyond the fine-tuned consultancy tool specific to a single company; it is a commercialized set of instructions and information about how to initiate and run a planning project available to the general public. Recognizing the benefits afforded by the charrette-style process, Roberts Day has refined the model for their own consultancy purposes. The NCI website on the other hand, describes the NCI Charrette System as “more than a charrette”:

*“It is a design-based, accelerated, collaborative project management system that spans the entire pre-construction period. It is a proven, flexible, three-step framework that can be customized for your project... The NCI Charrette System™ is a three-phase, holistic, collaborative planning process during which a multiple-day charrette is held as the central transformative event. The process commences with the Charrette Preparation Phase, followed by the NCI Charrette acting as a fulcrum at the middle phase, and closes with the Plan Implementation Phase.” (2001)*

Both models place emphasis on site-specific location for the design event. The NCI describe the event running from a “charrette studio” situated within the immediate vicinity of the site in order to make attendance by the local community easier. The PDF model also utilizes a suitable local facility (community centre or school), allowing the design team to make impromptu site visits. The local presence also ensures maximum exposure in local media increasing the perceived transparency of the decision-making. Both models have the design event as the second stage of the process during which time there is a series of opportunities for reflection and action, however, the NCI CS specifically builds in three major feedback loops, during which time design ideas are generated “based on project constraints and a public vision”, and then re-presented “within hours” for further review and adjustment. The NCI believe these loops or cycles also “foster a holistic understanding of complex problems by all participants”, and provide the “charrette team with the information necessary to create a feasible plan.” Furthermore, the importance of multiple feedback sessions means that the stakeholders do not need to be there all of the time, but they are still able to “become co-authors of the plan so they are more likely to support and implement it” (2001). Similarly to the PDF model, the NCI CS process begins with a public meeting to “solicit the values, vision, and needs of the stakeholders”, and a site visit with the key stakeholders. The NCI design team then “breaks off to create alternative plans or scenarios”. These concepts are re-presented, more input gathered, the team synthesizes this, and after a testing “for economic, design and political feasibility,” a preferred option is presented at a final public meeting (Figure 7). With the NCI system, there appears to be a greater ‘disconnect’ from the participation with stakeholders during the design evolution phase.

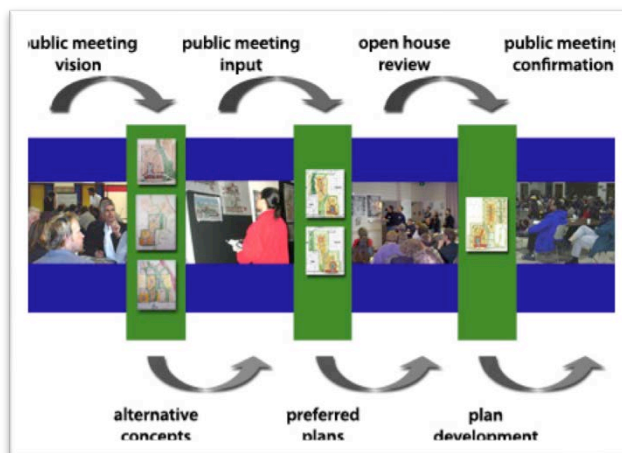


Figure 7: The NCI CS ‘event’ feedback loops

There is contact, disengagement for design, contact (showing drawings), disengagement for design (second time), contact (showing amended drawings), disengagement for final design. Drawings are finalized and then sent, on the cart as it were, for authoritative approval at the public summing up, and thereafter submission to planning authorities/agencies. The final stage of the PDF model also usually culminates in the lodgement of a proposal for planning approval.

#### Commercialization

In terms of systemizing and commercializing the charrette as a ‘tool’ for physical and community planning, the NCI approach appears to be leading the field. Most other proponents and practitioners are consultants who provide charrette style interventions as a service. The NCI has also developed a suite of other commercial avenues, including certified training programs, webinars, products (educational material and planning kits), tools and resources (videos, CDs, reports, downloadable presentations, project templates and publications), as well as project consulting services. This may offer potential for the development of business ideation toolkits in an expanded application (Clark and Lahtivuori 2010; Buur and Mitchell 2010).

#### Transferable Values

The time compression facilitates creative problem solving by accelerating decision making and reducing unconstructive negotiation tactics. It also encourages people to abandon their usual working patterns and ‘think outside of the box.’ (Lennertz, Lutzenhiser, and Failor 2008, 1). Both the NCI CS and the PDF model rely on the inclusion of design professionals to facilitate the conceptual thinking, design and drawing-related stages. The charrette core team does all the processing of information and drawing, with very little direct involvement of stakeholders. Both also to differing degrees separate out the active design and drawing input as part of the feedback loop, typical of the iterative design process: drawing then re-presenting. Both models privilege the expertise of those who are capable of working ‘en charrette’, or *drawing at the last minute...*

## 2.4 FAST + FURIOUS FORUM EXPERIMENT - PARTICIPATORY INNOVATION CHARRETTE ©

The Fast + Furious Forum (F+FF) was a one-off experiment in designing a 'Participatory Innovation Charrette' (PIC) for students. The action experiment took place in October 2011, and was developed as a 1 hour workshop for 2nd year planning students at Curtin University, Western Australia.

As a lecturer and hands-on tutor I wanted to develop a short drawing based workshop that would engage students in a more participatory and imaginative way at the end of their design project; to help drive from ideation to convergence, and for consolidation of the resource material delivered during the semester. As the students were not highly skilled in drawing or design, was also an opportunity to consider suitable methods of creative engagement with novices and people outside the design professions.

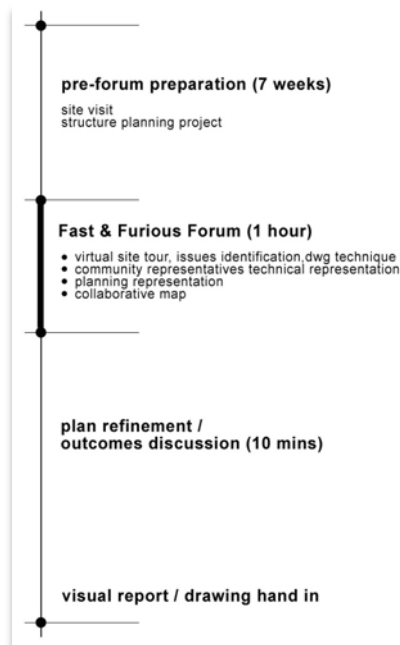


Figure 8: F+FF experiment; preparation and design event timeline

The workshop combined knowledge of a previous assignment (a site planning exercise), with the development of different stakeholder personas and narratives, 2 intensive rapid 'scribbling' sessions using mind/concept mapping techniques, and a discipline specific reflection on the drawings at the close. This exercise marks a return to the French origins from which a student focused fast-paced drawing-on-the-move process emerged, as a student-focused event in an academic setting, acknowledging novice design expertise. Students were encouraged to see themselves, as 'stakeholders' in the forum as if it were a public planning exercise and their collaboration was crucial. Each student was involved in the drawing stages, in exchanging drawings and moving to different seats as way of 'networking' the drawn narratives of stakeholder experience.

The format reflected the broad stages illustrated in the case studies; a period of pre-forum preparation (the previous 7 weeks of site planning lectures, tutorials and projects), a design event as the second stage (the Fast + Furious Forum exercise), and in this case the process completed on the day with the creation of a 'collaborative map', brief discussion of the outcomes and submission of the drawings (Figure 8). The structure of the Forum is summarised below (Figure 9):

| Fast + Furious Forum design event format (Stage 2): |  |
|---|--|
| Part 1:<br>10 mins                                  | Vision/task briefing:<br>Demonstration fast drawing, mind/concept mapping techniques, pictograms   |
| Part 2:<br>5 mins                                   | Site tour:<br>Virtual site tour - re-visit student structure plan (as designed)  |
| Part 3:<br>15 mins                                  | Community representation:<br>Select citizen, map (sketch style narration) day living in site as designed   |
| Part 4:<br>15 mins                                  | Technical representation:<br>Move, swap drawings, select 'expert', select suitable forum location on site, map (sketch style narration) day involved in forum event.   |
| Part 5:<br>10 mins                                  | Planning representation:<br>Move, swap drawings, reflect on impact of design decisions made on plan (back-casting),<br>Discuss (brainstorm) planning issues presented by combination of 'daily story' scenarios on plan, annotate, link related issues   |
| Part 6:<br>5 mins                                   | Creating a 'collaborative map':<br>Pushing together participatory plans: identifying 'touch points', movement patterns and related issues across sheets – thus across a community of varied stakeholders. Acknowledge the chaos of drawings as abstracted representation of the complexity of designing physical communities from multiple viewpoints. |

Figure 9: Summary of F+FF design event session stages

There were some immediate issues I felt students were experiencing in relation to tackling a planning course without the drawing, design or 'life' skills available to experienced professionals, these included:

### Student concerns:

- The students were experiencing anxiety over the pressure to learn graphics software programmes (e.g. Photoshop, InDesign, SketchUp, etc), and disregarded learning to hand draw.
- Many students were not confident that their hand-drawing skills were even acceptable for rough conceptual sketching and they avoided even marking up plans.

#### *Lecturer concerns:*

- Students with graphics capability are too often moved quickly past the conceptual development stage without proper resolution 'in rough'.
- Planning students too often rely on words for communication, unlike architecture students more used to drawing. The planning site drawings to date were often covered in text, or supplemented with a report explaining what should have been on the drawings, but they were not confident enough with their skills to put on there.
- With their (hypothetical) site-planning project they had moved quickly through the physical process and not had time to reflect on the impact of their decisions on the lives of people who might live there in future.

As a design researcher and a practicing designer in a teaching role, I saw the F+FF event as an opportunity to encourage students to engage with professionally focused collaborative and participatory processes, but in a fun and informative way. The processes centred on three key areas:

#### *Collaborating with each other:*

- The previous two assignments had been group work and for some were fraught with difficulties, contested negotiations and workload problems.
- Move around, talk to students other than their normal friends, network and engage in conversations about possible interaction between members of a community.

#### *Hand drawing skills:*

- Put students under time pressure so they didn't procrastinate with the manual drawing work.
- Free up the task, moving away from the conventions of plan drawing and take on imaginative abstract techniques, such as mind-mapping. Experiment with pictograms and doodles, and try to interpret the doodles of others.
- Not designing, just drawing, as the design had been done to a certain extent through prior collaborative group project work.

#### *Considering future participation with others:*

- Reminding students to re-connect with human needs and behaviours easily forgotten when planning by land-use, statutory controls and regulatory policy (career development).
- 'Testing' their design proposals by selecting various personas and seeing how considered their earlier decisions might have been (back-casting).
- Create a way of 'experiencing' the future influence of designed environment on others via adoption of stakeholder roles, identifying 'touch points' in the daily movement of their 'citizens' and making people-oriented connections visible.



Figure 10: The Fast + Furious Forum – everything on the move!

In the same spirit of 'en charrette', the students had to work to strict time deadlines, which meant everything kept moving, fast and furious (Figure 9). I utilized the equivalent of the NCI CS 'feedback loops' in swapping drawings at each stage, requiring fresh interpretation of what was presented to you, and then engagement with it before swapping again.

To simulate being present in the 'site context' all their final design drawings for the strategic planning project completed the previous week were pinned on the walls (Figure 10). Students had been to the real location of their projects, so had existing site photographs and their own groups' design for hypothetical future development imposed on their sites.

New residential development is routinely established prior to human habitation and subsequent development of the community; this experiment reverses this process. Students were encouraged to think about the residents' experience first and then consider how the planning direction may facilitate their conceptual community (a type of reverse visioning, or back-casting).

In planning the methodology for this 'event', wherever possible I followed the essence of the design forum, and especially the 'nine rules for a good charrette' (Condon 2008, 56), as summarised in Figure 11. While the blank sheet 'tabla rasa' concept (Rule 2) is important for the charrette process, symbolic of the 'fresh start', I was sensitive to the speed students would need to get into the exercise and kept the paper size to a manageable A3 (Figure 12). Following mind-mapping approach I provided a cartoon style group of characters in the centre of the empty sheet to make it less intimidating, and provide a starting point common to all (F+FF - Part 3 Community Representation). A second character placed on the corner of the sheet plays a similar role for the subsequent step (F+FF - Part 4 Technical Representation). Students were allowed to use words in the final phase to draw together issues filtering through (Figure 13).



| The Nine Rules for A Good Charrette | Adaptations for 'The Great Fast + Furious Design Forum Experiment' of October 2011   |
|-------------------------------------|--|
| 1. Design with everyone             | Regardless of skills and experience – everyone is capable of pitching in! 43 students took part in the forum, sitting in groups around large tables.   |
| 2. Start with a blank sheet         | A3 sheet per person – placed portrait to start, then rotated 180 degrees, then rotated 90 degrees to finish.   |
| 3. Build from a policy base         | Keep within the context of the Unit Learning Outcomes, and build on the educational requirements for addressing Curtin Graduate Attributes   |
| 4. Provide just enough information  | Step by step direction, overview only – examples of mind maps, concept map and pictograms were provided, students were free to develop own style of mapping.   |
| 5. Talk, doodle, draw               | Mind or concept mapping to explore the experiences of stakeholders, pictograms. Talking, doodling and marking with pens encouraged but no writing!   |
| 6. Think jazz not classical         | Keep it fluid and casual, 'we will mash ideas together at the end'   |
| 7. Lead without leading             | Start the flow - give some guidance at each stage, and then step back  |
| 8. Move in, move out, move across   | Look at different 'role play' experiences, explore perspectives; collaborate with both neighbours while drawing to identify touch-points across drawings. Swap drawings, swap locations, swap roles, swap stories, and swap pens – totally interchangeable via medium and meaning. |
| 9. The drawing is a contract        | No need to be pretty, or detailed. Accept that the task is simply documented exploration, not a submission for critique  |

Figure 11: The Nine rules; methodology/ethic for a good charrette, applied to F+FF (Condon 2008).

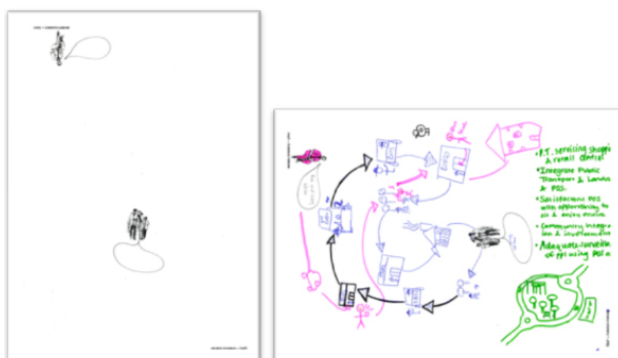


Figure 12: Starting with a blank sheet, ending with a fluid (and often bizarre) drawing!

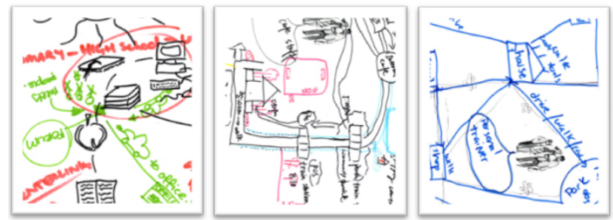


Figure 13: Extracts of the final drawings, demonstrating the refreshing freedom of childlike un-restrained exploration

The ultimate aim of the exercise, (Figure 9, Part 6), was to put all the drawings together and create a 'collaborative map' of experiences (Figures 14 and 15), participant visual stories (mapped narratives) and planning issues as an alternative representation of the wall filled with their structure plan drawings. However, the drawings effectively remained separate tiles rather than a collective map, as many of the students missed the instruction to take their drawing to the edge of the page in order to create literal 'touch points' with their neighbours drawing during the process.

### PART 3: CONVERGENCE

The two case studies and classroom experiment above demonstrate areas of departure or abstraction from the conceptual origin of 'le Charrette' in Paris.

#### 3.1 ENGAGEMENT & ABSTRACTION

All models demonstrate both divergence (ideation) and convergence (decision-making) but where the French model informs and empowers the students as novice designers, the two case studies utilize professional design skills to develop engagement with decision making wider; both consulting and involving other stakeholders in the design process. The F+FF experiment (PIC) returns to the empowerment of students, but also encourages the involvement of novice designers or planners in a more collaborative sense. The students had worked in groups for seven weeks to collaborate on the decision-making process to produce a structure plan for their site.

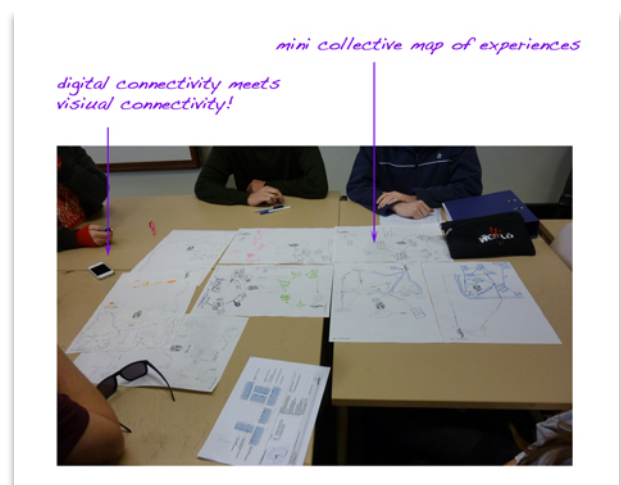


Figure 14: Collaborative Map making in practice, not quite the vision from theory, but close!

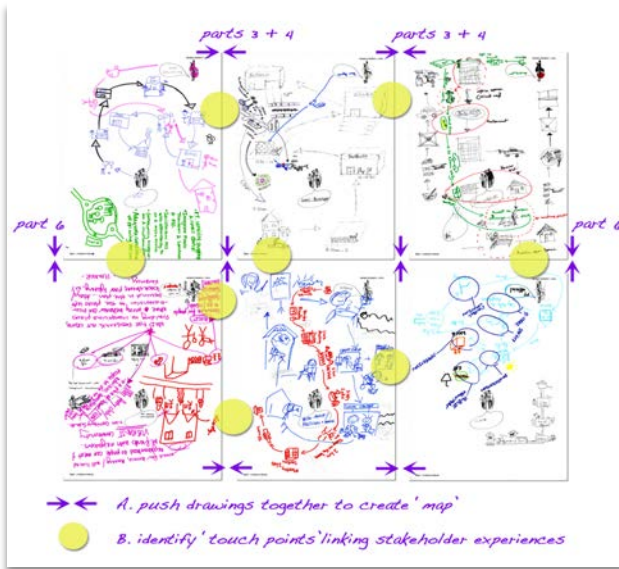


Figure 15: Collaborative map making, the construction theory behind the practice

The various models outlined above can be described generally as participatory design tools, with differing styles of engagement. Based on the International Association of Public Participation (IAP2) Spectrum, the level of public impact increases with the engagement, from a minimal impact ‘inform’ through ‘consent’, ‘involve’, and ‘collaborate’, to the highest level at ‘empower’. The IAP2 use of the word ‘public’ could equally mean project stakeholders, community, the general public or the people within an organization.

According to the DSE, public meetings and focus groups would fall under ‘consult’, workshops would be categorized as ‘involve’, citizen advisory committees and participatory decision-making tools would be classified as ‘collaborate’, and at the greatest level of public impact would be tools such as citizen juries and delegated decisions (DSE State Government Victoria 1996). The lack of collaboration and empowerment identified in relation to levels of ‘public’ engagement in the case studies have been carried forward for the improvement of the PIC model and as a basis for the development of an innovation charrette process and event for business (BMIC).

### 3.2 NEW FORMS OF CHARRETTE ECOLOGY: BUSINESS MODEL INNOVATION CHARRETTE ©

A brief look at two industry specific styles of charrette ‘event’ as case studies provided inspiration for the action experiment - an innovative participatory charrette workshop introducing a level of abstraction from the discipline specific application of this tool in current use. The notion of a Business Model Innovation Charrette (BMIC), is to take this abstraction even further and yet remain true to the essence of en charrette. As seen in the case studies, having begun to abstract the essence of the design charrette, and focus on the core skills – conceptual design and communication through sketching, I feel the process holds great potential as an integrated

participatory and innovative business model. It offers the basis for a process of collaborative participatory innovation, a preliminary act of co-creation, that may be applied to design professions outside of planning and architecture and beyond to organisations and businesses with little if any knowledge of creative processes.

Reflecting on the key characteristics of the models discussed in this paper highlights the potential for greater collaboration and empowerment of stakeholders from non-design or novice design backgrounds, both through the PIC as an experimental participatory workshop tool and the BMIC as an emerging model for collaborative innovation. Looking forward there is great potential to combine both the essence of the design charrette and other highly innovative and highly participatory effective engagement tools (after DSE), and also to utilize professional design skills to facilitate a process of co-creation helping overcome design and drawing skill deficiencies in stakeholders. While the BMIC is still under development, one thing is certain, business innovation strategies and systems for the future will need to incorporate greater engagement with issues of environmental, social, cultural and human capital. The organizations, institutions and businesses of tomorrow will need to be more sustainable as communities, inspired and innovative, connected and connecting. New business communities will comprise of engaged and engaging members, consuming less, creating more. A move from direct consumption to a more participatory engagement with objects and services has “obvious implications for the design and creative industries” (Carolan and Cruickshank 2011, 33), and the BMIC is well placed to jump on the moving cart and be part of the National Innovation System’s vision for the future of Australia.

### SUMMARY

The typical format and intention of the design charrette has been deconstructed to identify the creative and collaborative processes at work and identify participant relationships, and then re-constructed with greater emphasis on engaging stakeholders in the early stages of a project. It is in the concept stage where improvisation, exploration (through drawing) and creative thinking remain core values, but no longer the sole preserve of design professionals, as they move from a consultancy role to becoming co-collaborators in participatory innovation. The organisational structure of the charrette process, management of disparate input, movement of visually accessible information and the synthesis and subsequent communication of design outcomes has revealed opportunities for new abstractions from the original. Identifying and overcoming the limitations of the current charrette model(s), such as the extent to which innovation is currently facilitated will, I believe, present significant opportunities for participatory and collaborative innovation. Introducing greater flexibility in discipline focus and project tasks will stimulate and harness deeper penetration of ideation processes into

organisational structures. Informal design ‘events’, based on group interaction exercises and abstract drawing techniques, such as PIC and further extended open source forums, are highly promising as tools to generate proactive and cross-collaborative input when all stakeholders are involved, rather than a focus on isolated consultant-client relations. Participation and collaboration are increasingly important part of the business landscape that includes design consultancy, both to engage with external supply networks and clients/customers, and to increase staff ownership of issues and to create generative environments for internal innovation development. Investing in community engagement (business and/or public) is also an important part of developing an ethical and sustainable organization ecosystem, one that places value in human and social capital.

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## NOTES

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