

Creating a

Blueprint for Resilience

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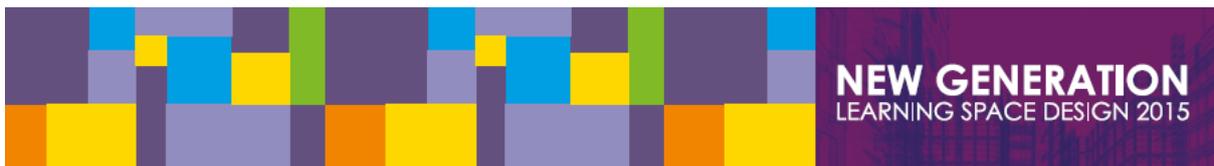
New Generation Learning Space management and support

Workshop Handbook

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WORKSHOP D

Wednesday, 18 March 2015 • 5:00 PM - 7:00 PM

Creating a Blueprint for Resilience in New Generation Learning Space Management and Support

Campus spaces and technology-enhanced learning environments are a major investment for organisations. Introduction of innovative spaces and technology can be linked to transformative learning and institutional objectives with pressure to demonstrate value for investment.

How can we maximise limited resources and future-proof our learning spaces and learning environments in a constantly changing higher education environment?

Resilience is about understanding and engaging with a changing world. This workshop introduces the Blueprint for Resilience which is a resilience approach to implementing innovation and managing and using learning spaces. The generic principles and tools have application more broadly to organisational management.

- The Blueprint for Resilience introduces new tools and ideas that can be used to plan and devise systems that can absorb and accommodate future events in whatever unexpected form they may take.
- Participants are encouraged to bring along their own real world problems with which they can engage and to which the Blueprint tools can be applied.
- This interactive workshop targets leaders, strategic decision makers and the multiple stakeholders at all levels who are involved with the design, planning, support of users, as well as the academics who are users of learning spaces.

Facilitator: Dr Janet Buchan. James Cook University, Townsville

Janet has over 15 years' experience in higher education across TAFE and universities in the various roles of manager, change manager, educational technologist, educational designer and more recently as a Senior Lecturer and Academic Developer at James Cook University, specialising in learning spaces.



Among her research interests are transitioning staff to new learning spaces with academic development approaches to supporting staff and students in maximising the use of learning spaces and technology towards blended learning.

Janet was the project lead on the 2013 Office of Learning and Teaching Extension Grant project into effective use of video-linked learning spaces: the COAL FACE project. She is a member of the *Australasian Society for Computers in Tertiary Education (ascilite)* National Executive Committee.

Janet's PhD. research looked at *developing resilience and managing change in organisational learning environments* in the face of uncertainty and change.

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Programme

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Introduction

Campus spaces and technology-enhanced learning environments are a major investment for organisations. Introduction of innovative spaces and technology can be linked to transformative learning and institutional objectives with pressure on divisions and faculty to demonstrate value for investment.

So, how can we maximise limited resources and future-proof our learning spaces and learning environments in a constantly changing higher education environment?

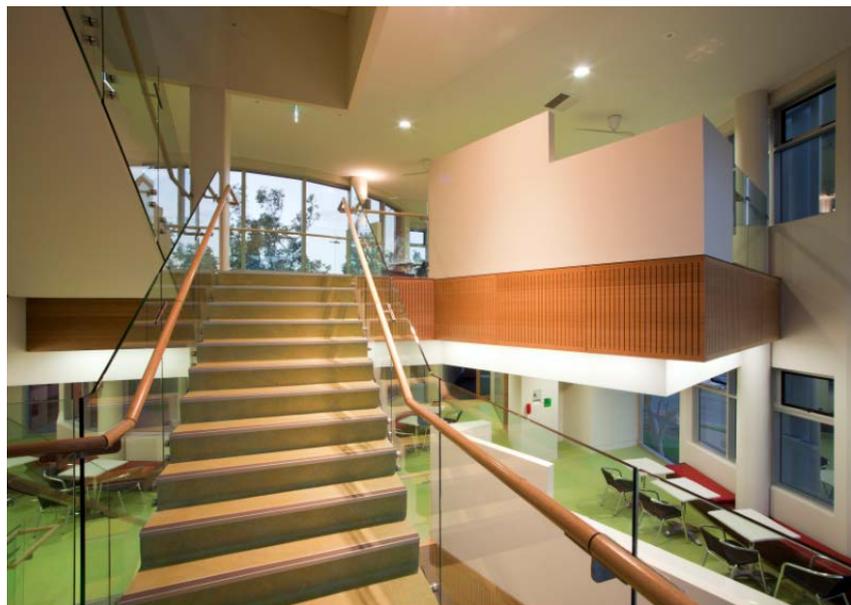
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Resilience is about understanding and engaging with a changing world. This workshop introduces the *Blueprint for Resilience* which is a Resilience approach to implementing innovation and managing and using learning spaces. The generic principles and tools also have application more broadly to organisational management.

Aims & objectives/Outcomes

The aims of this workshop are to:

- introduce participants to a variety of tools for developing resilience in their work environments;
- give participants the opportunity to apply the Blueprint tools to their own real world problems;
- explore the planning and development of organisational systems that can absorb and accommodate change; and
- share ideas and experiences with other professionals in the field.



Expectations & introductions

Share group expectations and introductions.



- *Who are you? What is your role and/or interest in learning spaces in your organisation?*
- *Share your expectations for the workshop. Why are you here, what do you aim to get out of the workshop?*



Bright ideas and take-home messages



Your thinking space

Background – An Introduction to Resilience Thinking

Resilience Thinking builds the capacity to work with change as opposed to being a victim of it.

Resilience is the capacity of a system to undergo some change without crossing a threshold to absorb disturbance and to retain essentially the same structure function and feedbacks. (Walker & Salt, 2006)

This workshop promotes the use of *resilience thinking* as a holistic way of approaching management problems in higher education environments. In 1973, the concept of *resilience* was introduced into environmental management as a way of thinking that would contribute to an understanding of constantly changing systems. The potential for the application of Resilience within the field of higher education management was explored through doctoral research (Buchan, 2014).

A management approach based on resilience...would emphasize the need to keep options open, the need to view events in a regional rather than a local context, and the need to emphasize heterogeneity. Flowing from this would be not the presumption of sufficient knowledge, but the recognition of our ignorance; not the assumption that future events are expected, but that they will be unexpected...The resilience framework can accommodate this shift of perspective, for it does not require a precise capacity to predict the future, but only a qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they may take (Holling, 1973, p. 21).

The following summary of the essential concepts of Resilience is adapted from Buchan (2014, pp. 36-39).

Two central themes which underpin Resilience are: *thresholds* and *system dynamics*.

System dynamics describes how a system changes over time. Higher education systems are complex adaptive systems. As such they can be unpredictable and do not change in a linear, incremental fashion. These systems have the potential to exist in more than one state or regime where their structure, function and feedbacks are different. Disturbances and shocks to the system can drive the system across a threshold into a different regime.

Thresholds are crossing points that have the potential to alter the particular system (Walker & Salt, 2006, p. 53). *Thresholds* are levels in the system's controlling variables where feedbacks to the rest of the system change. A key tenet of Resilience Thinking is that systems have multiple stable states, or regimes, which are separated by thresholds. Resilience is the capacity of a system to undergo some change without crossing a threshold, to absorb disturbance and to retain essentially the same structure, function and feedbacks (Walker & Salt, 2006)...

A *ball in a basin* metaphor or model is used to illustrate the concept of multiple stable states and systems crossing thresholds during periods of transformation. The system is depicted as consisting of a number of basins in two, four- or more dimensional space (see Figure 1). The variables used to describe the system are the system's *state variables*. In Walker and Salt's metaphor, the ball represents the combination of variables under scrutiny. The position of the ball represents the current state of the system.

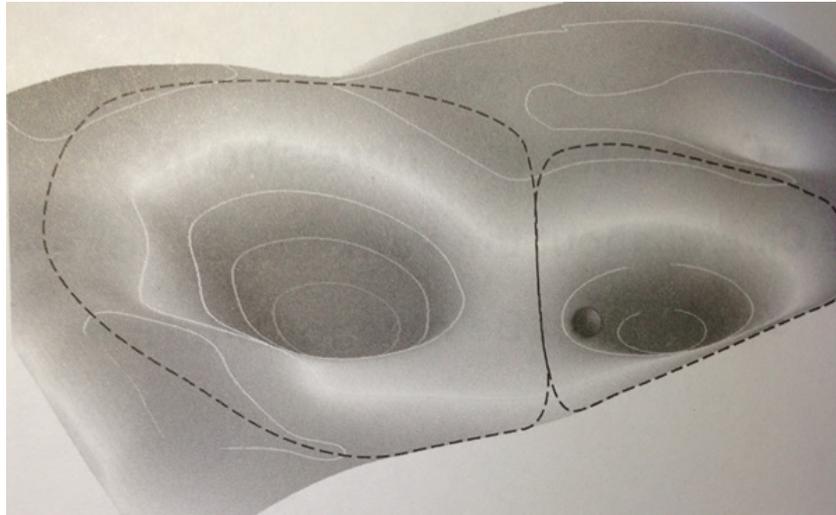


Figure 1: The system as a ball-in-the-basin model. (Walker & Salt, 2006, p. 54).

Each system can be envisaged as having a number of basins in two-, four- or n -dimensional spaces. The shape of the basin is continually changing in response to changing external forces. “From a resilience perspective the question is how much change can occur in the basin and in the system’s trajectory without the system leaving the basin” (Walker & Salt, 2006, p. 54). The system can be said to have crossed the threshold into a new regime, or basin of attraction, when it has developed a different structure and function. This moves the system beyond the edge, or limit, of the basin. This limit is defined as that point where there is a change in the feedbacks that drive the system’s dynamics and the system tends towards a new equilibrium or stability landscape.

Crossing a threshold into a new basin of attraction has important consequences for society and the environment since some states are more desirable than others. Along with the change in state of the system is the change in the system itself. For example, external conditions may cause the basin to become smaller or shallower thereby decreasing the Resilience, or the ability to absorb changes, and increasing the ease with which the system crosses into a different basin. Resilience is a measure of how much disturbance and change a system is able to take before it loses the ability to stay in the same basin. “It’s about what happens near the edge of the basin, not what happens near the equilibrium point at the bottom” (Walker & Salt, 2006, p. 63). Resilience of the system is not to be confused with the more common use of resilience in education and medical fields where resilience is used to describe individual attributes or capacity.

DIMENSIONS of the BLUEPRINT FOR RESILIENCE

Step 1 Identify and understand the problem

- ❖ Snakes&Ladders exercise
- ❖ Understand the features of Wicked Problems

Step 2 Where is your sphere of Influence/responsibility and locus of control for learning spaces (or other roles etc.)?

- ❖ **Locus of Control /Sphere of Influence Model** for actions

Step 3 Analyse and describe the organisational environment

- ❖ **Para-analysis:** Map the impacts of the introduction of different organisational initiatives to understand the effectiveness of learning space (or other) initiatives. Identify external impacts.
- ❖ **Adaptive Cycle Framework:** Determine the transformability of the organisation. Where are the different parts of the organisation/system in relation to the cycle, where do they need to be? Do you want to/need to force a transformation/change of state or to absorb the change and remain the same?
- ❖ **Adaptability of individuals:** understand individual capacity to adapt to organisational change, new learning spaces and technology.

Step 4 Identify and plan actions

- ❖ Apply the **3G Essentials Management Checklist** [refer to the *Snakes&Ladders* activity as a starting point]
- ❖ Refer back to *Sphere of Influence/Locus of Control Model*

Step 5 Determine the resilience outcomes for the institution and individuals

- ❖ **Adaptive Cycle Framework:** Resilience & Transformability. Ability of system to transform or absorb the change within current system (Ball in basin). Do you want to/need to force a transformation/change of state or to absorb the change and remain the same?
- ❖ Identify the desired resilience features. **Management Checklist.** Choose from/add to the different Resilience features that make an organisation resilient.
- ❖ Create your **Dream Team**

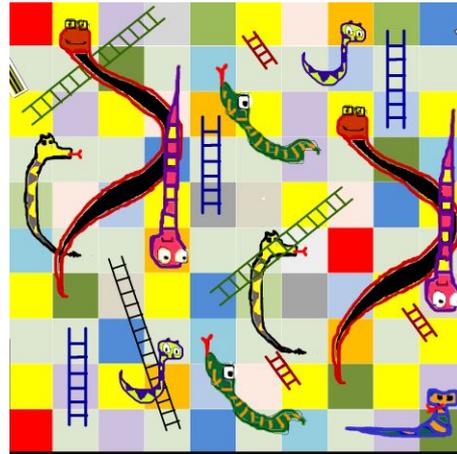
Step 6 Carry out the action plan. Continuous improvement: PIRI

- ❖ Monitor and evaluate progress at each stage
- ❖ Kotter's 8 Dimensions of Change

Step 1: *Identify and understand the problem*



❖ *Snakes&Ladders* exercise



THE REAL WORLD CHALLENGE

Design and deliver a new learning space that can be shown to deliver a return on investment by contributing to a university's strategic directions in active and blended learning

❖ *Understand the features of Wicked Problems and resilience*

'Wicked problem' is a term used to describe a problem that is difficult or impossible to solve because of incomplete, contradictory and changing requirements that are often difficult to recognise. Moreover, because of complex interdependencies, the effort to solve one aspect of a wicked problem may reveal or create other problems.

At its simplest, a wicked problem can be described as having the following defining characteristics:

- You don't understand the problem until you have developed a solution.
- Stakeholders have radically different world views and different frames for understanding the problem.
- Constraints and resources for solving the problem change over time.
- Wicked problems have no stopping rule (the problem is never solved completely).
- Every wicked problem is essentially unique and novel.
- Solutions to wicked problems are not right or wrong.
- Every solution to a wicked problem is a 'one-shot' operation (Buchan, 2012).

Do you have a Wicked Problem? YES NO

STEP 2: *Where is your sphere of Influence/responsibility and locus of control for learning spaces (or other roles)?*

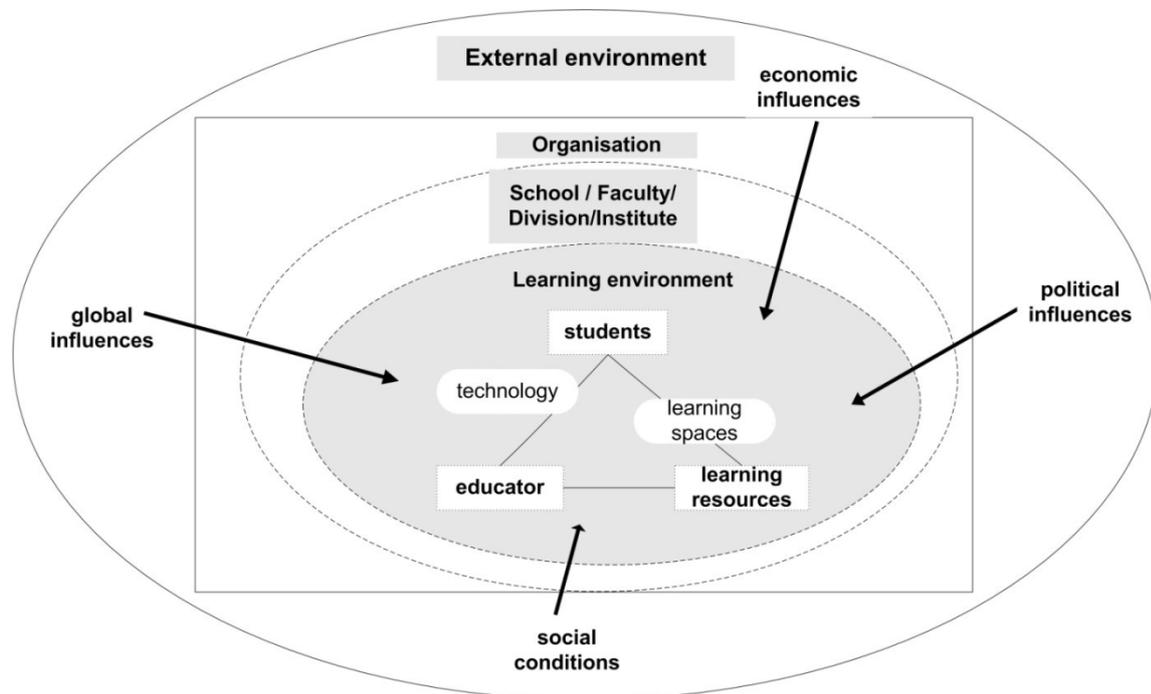


Figure 2: Sphere of Influence / Locus of Control Model for actions

- ❖ **Put yourself on the Sphere of Influence/ Locus of Control Model in your organisation.**



STEP 3: Analyse and describe the organisational environment

There are a number of tools which can be used to analyse and describe different aspects of the organisational environment.

- ❖ **Para-analysis:** This tool can be used to map the perceived impact of the introduction of different organisational initiatives in order to understand the effectiveness of learning space (or other) initiatives. Identify external impacts.

“Para-analysis is a management tool that can be used to map [projects, initiatives and other factors] in time and institutional space. It...can help an institution make decisions not simply according to physical and financial resourcing, but importantly, the potential impact the outcome of the project might have on individuals” (Buchan, 2014).

Figure 3 illustrates the use of para-analysis for understanding the impact of implementing new learning technology and other institutional changes on individuals over a period of time. The acronyms and names refer to the names of in-house systems in the case study university.

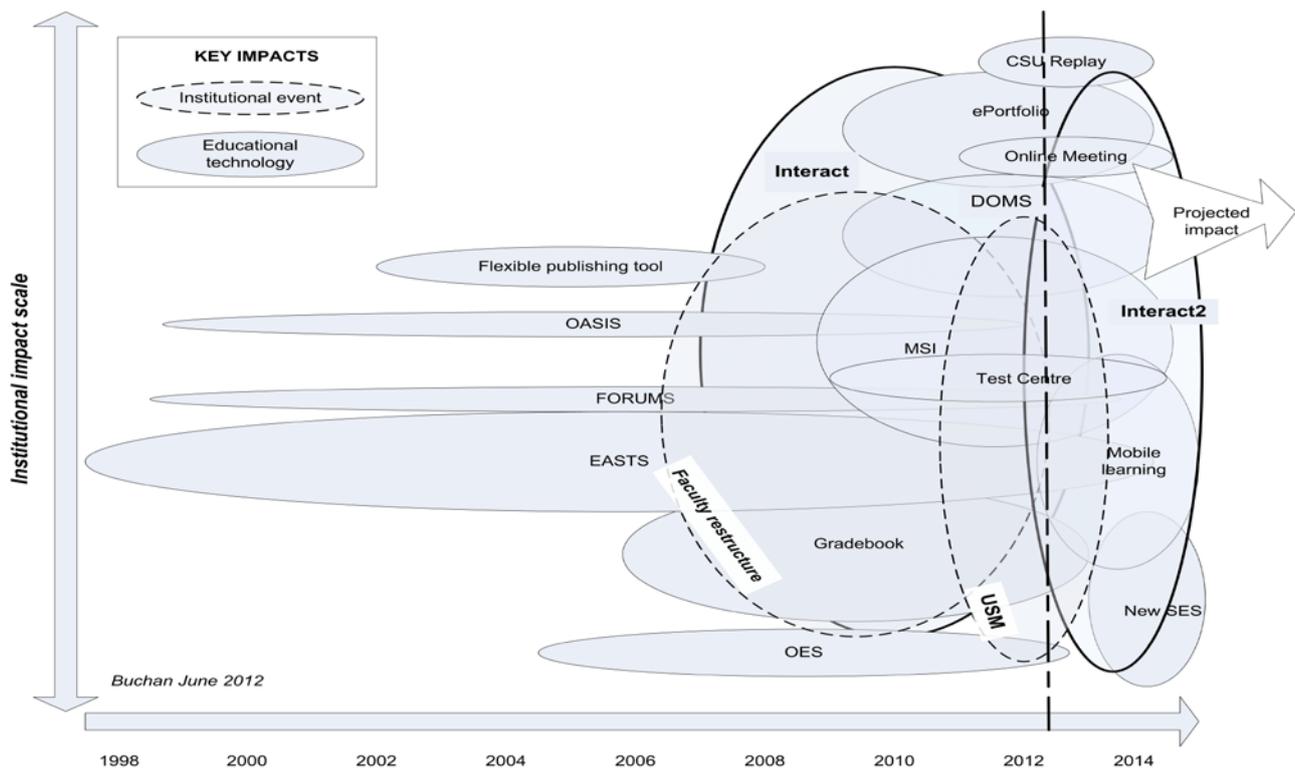


Figure 3: A para-analysis view of the impact of teaching and administrative systems used by academic staff in 2012. (Source: Buchan, 2014, Figure 5.6. p.155)

- ❖ **Adaptive Cycle Framework:** Determine the transformability of the organisation. Where are the different parts of the organisation/system in relation to the cycle, where do they need to be? Do you want to/need to force a transformation/change of state or to absorb the change and remain the same?

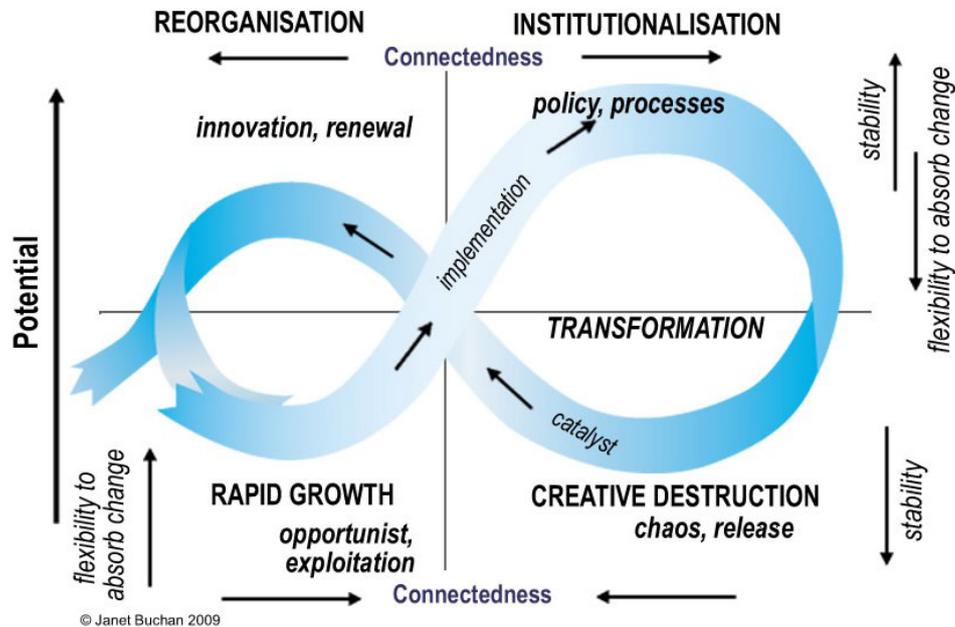


Figure 4: The Adaptive Cycle Framework: A framework for understanding transformation of educational systems at macro- and micro- levels (Buchan 2011).

Features of the phases of the Adaptive Cycle

Creative destruction. Loss of normal connections, changes in interactions amongst stakeholders, inefficiencies in operations, loss of dependencies, changes in roles, freeing up of resources/people from old ways of doing things.

Reorganisation. Innovation – trying new ways of doing things, trial and experimentation in day to day operations, sharing of ideas, questioning of status quo, pilots and trials of new technology, teams/communities of practice set up, inefficiencies, leadership emerges.

Rapid growth. New processes and procedures developed, sharing of practice, acceptance of technology, improved efficiency, leadership cemented, creating and taking opportunities to make the most use of new technology and available support opportunities, new connections, interactions and dependencies forming, collaboration.

Institutionalisation. Improved efficiencies in operations, long lasting relationships develop, ongoing development of processes, ongoing small-scale renewal and review and improvement of processes, building up of resources, centralised services have well developed processes and procedures. (Buchan, 2011, p. 167)

- ❖ **Adaptability of individuals:** understand individual capacity to adapt to organisational change and new learning spaces and technology.

Personal capacity to adapt to change is a conscious choice.

Buchan, 2014. Summarising a Ph.D. thesis in a single sentence

'I think the trick is to accept. Not blindly accept, but to look at [what a new technology] can do for you. If I critically analyse something [then I am able to see] what it can do for me now'

My ability to adapt to [change] I suppose is interesting in that I am more often than not the agent of change not the recipient. So my adaptation to that, one would hope, is okay because I am more often than not the cause.

My ability to adapt to [change] I suppose is interesting in that I am more often than not the agent of change not the recipient. So my adaptation to that, one would hope, is okay because I am more often than not the cause.

STEP 4: Identify and plan actions

- ❖ Apply the **Learning Environments Management Checklist** [refer to the *Snakes&Ladders* activity as a starting point]
- ❖ Refer back to *Sphere of Influence/Locus of Control Model*

The 3G ESSENTIALS: A checklist for the institution

Getting **ACCESS** Getting **CONNECTED** Getting **COMFORTABLE**

The *3G Essentials* represent the basic needs of students and staff that need to be met when courses are offered in a variety of learning spaces, in different modes, in multi-campus, distributed and online learning environments (Birks, Buchan, Smithson, & Norris, 2014; Buchan, Smithson, Wicking, & Birks, 2014).

- **Getting ACCESS** - to the learning spaces and associated resources;
- **Getting CONNECTED** - to one another and to support mechanisms both within and beyond the university environment; and
- **Getting COMFORTABLE** - in the use of those spaces and resources

The *3G Essentials Management Checklist* has been modified into a preliminary **Learning Environments Management Checklist**. This can be used to support the operational aspects of meeting the basic needs of the staff and students. The key management categories can be used to assist identification and diagnosis of issues and to inform inter-stakeholder planning and the development of strategies.

www.coalface.org.au

Learning Environments Management Checklist

(Adapted from Buchan et al., 2014)

1. Stakeholders

Identify the stakeholders involved with managing the learning environment and supporting staff and students. Identify the problem and approach the relevant person or section. Stakeholders include: Faculties/Colleges, ICT Services, audio-visual services, buildings and grounds/ estate office, timetable managers, learning and teaching support units, library and information services and institutional leadership and policy makers – or their equivalents in an institution.

2. Communication

Identify the chains of communication: relevant committees, project teams, work units and a mandate for those groups to communicate around supporting the student learning experience and access the building, maintenance and use of technology-enabled learning spaces.

3. Institutional planning and policy

Identify key institutional strategic plans and learning and teaching-related policies. Institutional planning should be strategic and address a common vision for learning and teaching. Learning and teaching policy and guidelines need to drive activity and decisions.

4. Budget

Institutional funding to support technology, staff and students, development of learning spaces budget for equity in access to equivalent learning spaces and technology for all students to promote active learning. Includes equity considerations in student personal budgets to support their studies and access.

5. Support for students

To navigate the learning environment and blended modes of delivery, students require a range of support: pastoral care, tutoring in approaches to study, time management, developing technology competency and digital literacy, access to a variety of learning spaces, technology and learning resources.

6. Support for academic staff

Professional development, mentoring, educational design for blended learning, technical support.

7. ICT infrastructure and support

Management of ICT infrastructure and audio-visual equipment requires communication between stakeholders about the selection and maintenance of hardware and software to support learning and teaching needs in distributed learning environments; and sufficient training/ professional development and/or online resources made accessible. Key aspects: networking and wifi, learning management systems, videoconference, web-conferencing.

8. Campus learning spaces design and support

Support the design and development of appropriate learning spaces, identify operational aspects, engage user groups

9. Evaluation and feedback

Feedback from the student and staff experience is captured and fed through clear channels of communication towards future improvements and enhancing the student learning experience and managing the many aspects of the learning environment towards evidence-based management.

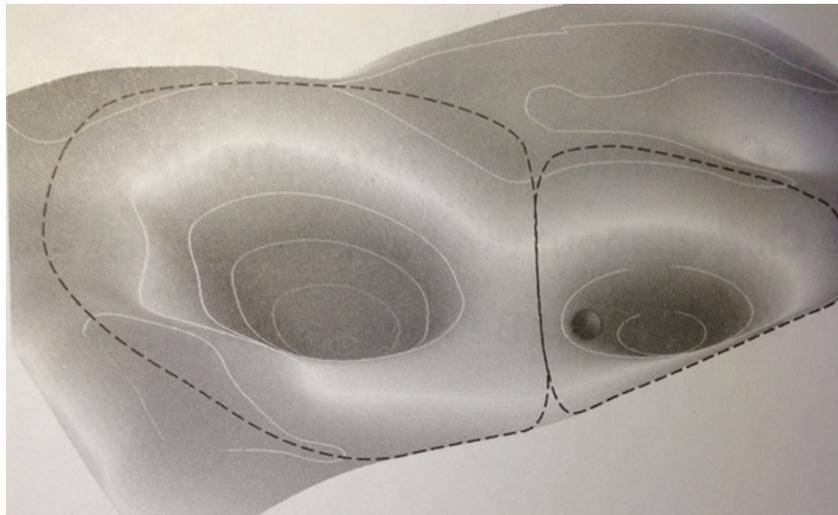


❖ Identify the Resilience Features which will make your institution/unit resilient with respect to learning spaces.

FUNCTIONAL ASPECT	RESILIENCE FEATURE
1. Stakeholders	
2. Communication	
3. Institutional planning and policy	
4. Budget	
5. Support for students	
6. Support for academic staff	
7. ICT infrastructure and support	
8. Campus learning spaces support	
9. Evaluation and feedback	

STEP 5: *Determine the resilience outcomes for the institution and individuals*

- ❖ **Ball in Basin Model:** Resilience & Transformability. Ability of system to transform or absorb the change within current system. Do you want to/need to force a transformation/change of state or to absorb the change and remain the same?



Do you want to /need to force a transformation /change of state?

YES No

Do you want to / need to absorb the change and remain the same?

YES No

❖ Create your DREAM TEAM

The key to a resilient organisational system is good communication, a common vision and having the right people in the same room at the right time.



Create your **Dream Team**. Choose those stakeholders: units, departments, faculties and individuals who might be key to the success of managing and supporting learning spaces, technology and student/staff learning in your organisation.



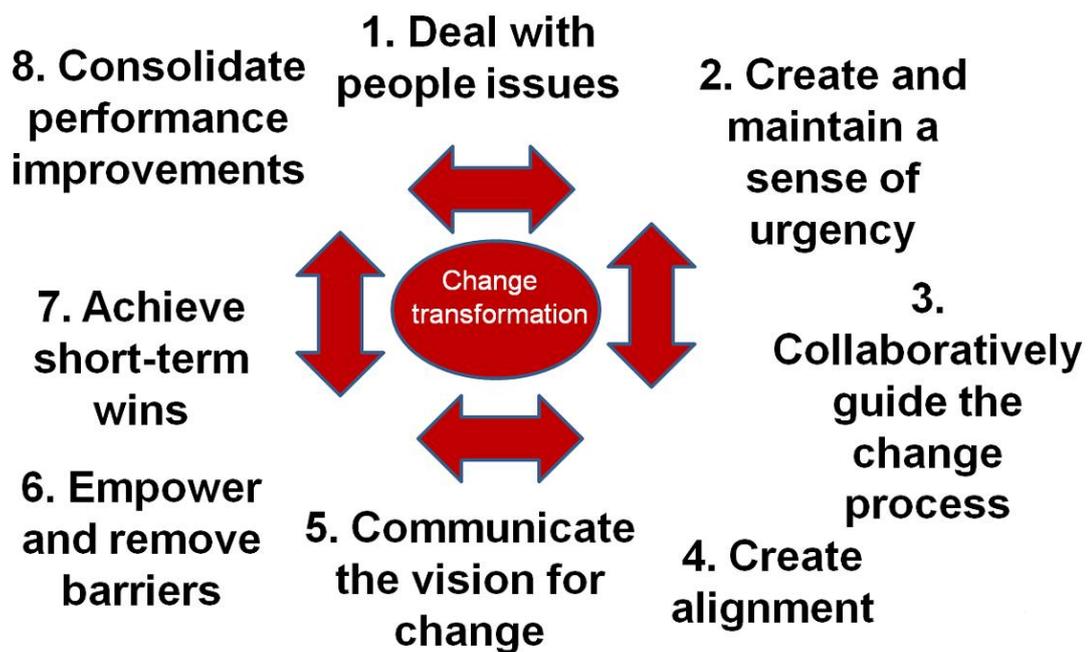
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STEP 6: Carry out the action plan. Continuous improvement

- ❖ Monitor and evaluate progress at each stage
- ❖ Kotter's 8 Dimension of Change management
- ❖ Manage for changes and impacts in the external and internal environments

Other organisational planning and action tools

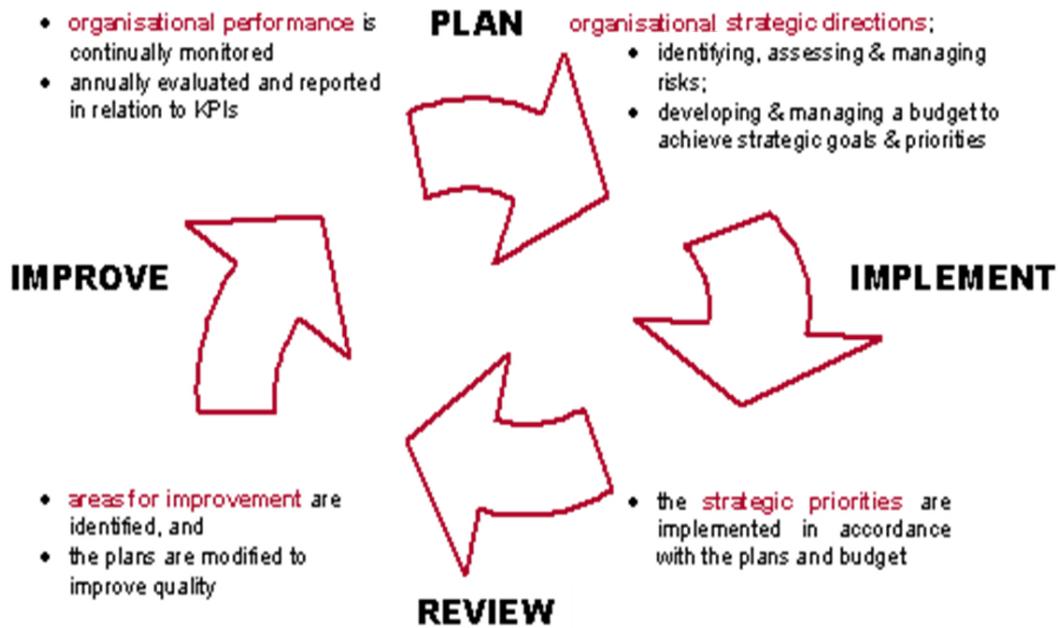
Kotter's 8 Dimensions of Change



(Buchan & Uys, 2010; Kotter & Cohen, 2002)

PIRI

Continuous improvement framework.



Bright ideas and take-home messages



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