

# BEYOND SWABS AND SOLVENT GELS: USING SCENARIOS TO GENERATE, EVALUATE AND NAVIGATE CONSERVATION FUTURES

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There is an African proverb which says “tomorrow belongs to the people who prepare for it today”, a tenet well suited to the conservation profession. The preservation of cultural heritage for future generations is the *raison d’être* for conservators and yet the profession has put little effort into considering what those future generations and their world will be like, and consequent ramifications for conservation. Although it is impossible to predict the future, by reviewing trends within social, environmental, technological and economic domains, we can begin to identify future opportunities and constraints our profession may face. Some questions to consider are: How will future generations value cultural heritage and engage with it? Who will control or manage cultural heritage resources? And most importantly for AICCM, what will this mean for the future of the profession?

This paper discusses the use of scenario planning as a means of identifying and preparing for the possible, probable and preferable futures of the conservation profession in light of such change, and proposes that scenario planning can be a valuable tool for conservators as we move our profession forward into an increasingly changeable and complex world.

## INTRODUCTION

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In 1973 the ICCM, now the Australian Institute for the Conservation of Cultural Materials (AICCM), was established to advocate for and represent the conservation profession. Over its 38 year history, it has witnessed the creation of many jobs for conservators in cultural heritage institutions and private practice, large shifts in analytical and treatment capabilities made possible through advances in technology, and a deeper understanding of what constitutes an artefact, encompassing both tangible and intangible properties.

Within the wider system of public and private collections and heritage preservation, the conservation profession has adapted to new ways in which museums and individuals choose to collect, preserve and present their works. Some of the more visible shifts over the last 40 years include but are not limited to:

- the establishment of or access to an in-house or a government-sponsored conservation lab for every national and state cultural heritage institution;
- growth in the number and size of collections;
- professionalization and increasing specialisation across the cultural heritage industry;
- development and subsequent reliance upon computer technologies to manage, record, interpret and display our collections;
- proliferation of material types used to produce art and material culture;
- the push to quantify and measure cultural heritage activities against economic parameters;
- recognition for alternative values of artworks and artefacts in the intangible;
- increase in the number of and access to scientific tools for materials analysis;
- globalisation and the expansion of cultural heritage tourism;
- changing fashions in collection display;
- broadening of the visitor base by redefining approaches to access, engagement and education.

The aim of this paper is to offer a way of approaching and making sense of the space in which the conservation profession may find itself over the next 20 to 30 years. By exploring the social, political and economic challenges facing society and the museum profession, it is hoped that conservators both individually and as a group, will thoughtfully consider possible, plausible and probable outcomes allowing them to move beyond business-as-usual thinking to develop flexible, more effective strategies for maintaining relevant and sustainable practice.

This paper will:

- discuss the purpose, method and practical implications of incorporating scenarios as a tool to create a coherent frame work for thinking about and making decisions for the future
- outline mental models useful for thinking about the future and the nature of change using conservation treatment as an analogy
- highlight a handful of emerging trends from which a set of three seed scenarios have been developed to provoke thought and discussion about the futures of conservation

## AGENTS OF CHANGE

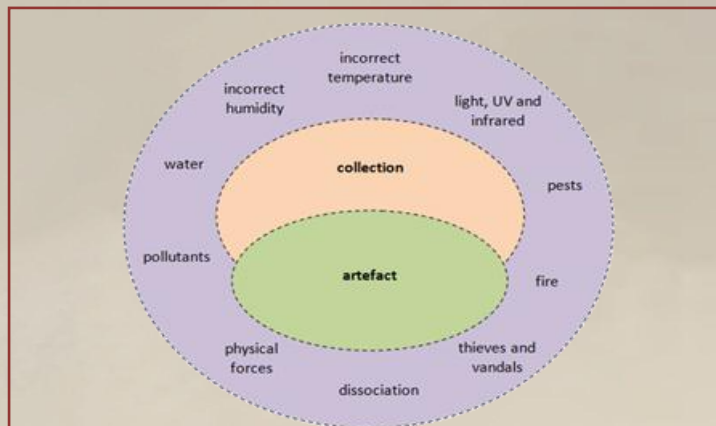
*The effort to provide the necessary background of facts and understanding regarding the underlying chemistry may not be of immediate interest to the practicing conservator, and the objective of many such (scientific) studies is rarely that of immediate application. (Robert Feller, Conservation scientist) (Feller 1994: 91).*

Talking about the future might, at first, seem absurd. It is true that ‘the future’ cannot be predicted and yet

we as conservators manage the potential futures of objects and concepts of change over time on a daily basis. In conservation practice, an artefact is understood to have a certain physical state or level of stability that deteriorates over time. The aim of conservation is to extend or prolong that stability. Deterioration or change, occurs as a result of a number of internal and external forces usefully summarised by the Canadian Conservation Institute as ‘Ten Agents of Deterioration’: physical forces; thieves and

vandals; dissociation; fire; water; pests; pollutants; light, UV and infrared; incorrect temperature; and incorrect relative humidity (Figure 1).

Similarly, social systems such as professional bodies, companies and organisations can be viewed as having a certain state of stability or viability that adjusts to changes generated both internally and externally over time. One of the key activities of management and the purpose of strategic planning is to develop and implement strategies to best manage the effects of this change. Rather than conservation’s ‘Ten Agents of Deterioration’, strategic planning reduces the breadth of macro-environmental forces of change into the five factors of social-cultural, technological, ecological, economic and political, to form the mnemonic STEEP.<sup>1</sup> Figure 2 provides a model with regards to conservation and the AICCM.



**Figure 1** | Materials conservation requires understanding and managing the interaction of agents of deterioration upon the individual artefact, sometimes within the more complicated system of a collection.

<sup>1</sup>There are a number of variations to this simplification which others may be more familiar with including PESTLE which adds a legal component; STEEPLD which adds ethics and demographics and STEER which substitutes political factors for regulatory ones.

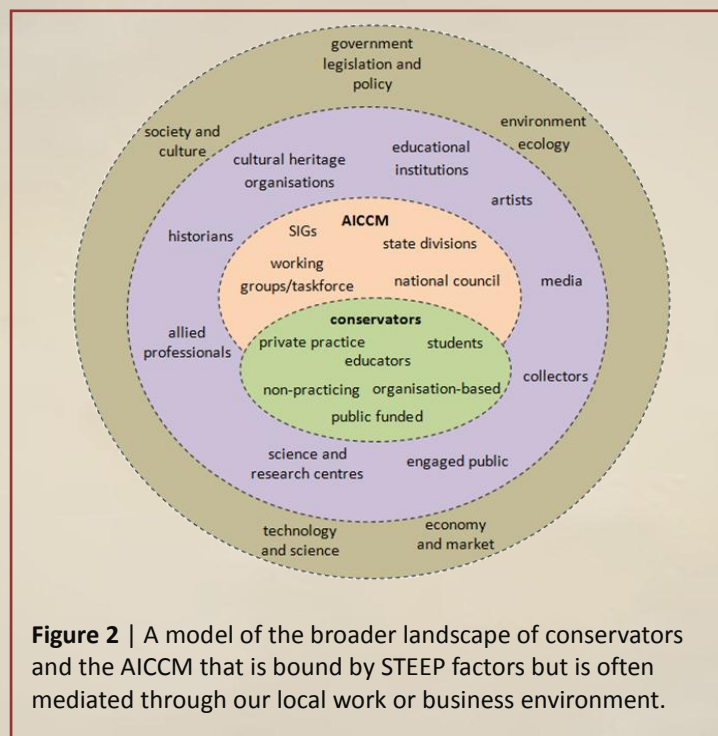
## BUT WHY THINK ABOUT THE FUTURE?

Feller noted in 1994 that the effort and time required to understand complex material systems, has not always been appreciated by the conservator. His observations were that conservators complained of a lack of relevance of scientific research for practice. Feller believed that this was justified given that “our science-based understanding of how to treat and how best to take care of the diverse materials found in museums, archives and historic sites is still in a very incomplete state” (Feller 1994: 91). However, very few of us would deny that the pursuit of a deeper understanding of science underpins best conservation practice. Feller continues, “There is a great need to build up the extensive background of facts and understanding required before sound new practices of care and treatment can be established.”

Similarly, the effort and time required to consider the complex system in which the conservation profession interacts may not seem to be immediately relevant or applicable to what we more commonly think of as conservation practice. In fact, the effort required to make sense of the interplay of agents of change over time can be daunting and overwhelming and is usually approached by only a handful of senior conservation professionals. This is understandable given the complexity of the issues that need to be considered both in breadth and in depth. Critical understanding takes time to develop. This is made even more complex by the drivers of change from within the profession itself, in the form of the

aspirations, concerns, doubts, pride, passion, fears, hopes and interests of the individual conservators that form the AICCM membership. It is these passions, aspirations and fears for both our artefacts and practice that has shaped the professional body that we have today.

Just as it is important to compile the facts and build up our understanding of an issue or problem before executing a treatment strategy, taking the time to gather the facts and develop an understanding of agents of change around our profession is the key to developing good practice and policies and wiser decision-making. Some conservators, senior conservators and conservation managers in particular, have often intuitively developed their own methods for understanding how these interactions may potentially unfold and manifest themselves over time yet there appears to be little in the conservation discourse as to what these potentialities are or articulated visions of what could be and why? The Futures discipline has much to offer in helping to frame, articulate and share understanding in this area.



**Figure 2** | A model of the broader landscape of conservators and the AICCM that is bound by STEEP factors but is often mediated through our local work or business environment.

Most recently Jerry Podany, Senior Conservator of Antiquities at The Getty Conservation Institute, has called for “more discussion about what we mean by *the future*” (MacDonald & Levin 2011: 20) to help inform the choice of materials for treatment and manage collection resources whilst May Cassar, Professor at UCL Centre for Sustainable Heritage, talks of the need to “communicate a vision of conservation that is socially and environmentally responsible” (Cassar 2009: 8). In her 2002 publication

*Managing Conservation Museums*, Susan Keene<sup>2</sup> writes “Experience suggests that it is invaluable for a group to take the time to look as far ahead as it can, and to generate imaginative views of where it would like to be in the future” (Keene 2002: 176). Though the need to define, discuss, create or communicate the future of the profession has been identified, there is little in the conservation literature to tell us how it is we can most effectively do this. The aim of this paper is to address this situation by introducing and explaining scenario planning as a tool for thinking about the future.

## SCENARIO PLANNING: A FUTURES THINKING TOOL

*The healthy brain is constantly writing scenarios, interpreting signals in the environment and reframing them into meaningful images and trajectories into the future. Healthy organisations do this too. (Lindgren and Bandhold, Futurists) (Lindgren & Bandhold 2009: 1).*

As a formal methodology, scenario development has a 60-year history in military, government policy and business use. Its origins are most commonly attributed to Herman Kahn, futurist and military strategist for the RAND Corporation during the Cold War. By the 1970s scenario planning had spread to the commercial sector and was adopted most

<sup>2</sup> Susan Keene has amongst other roles, worked as both the Head of Collections Management in the Science Museum and Head of Conservation in the Museum of London and director of the MA in Museum Studies at University College London

Futures tool	Scenarios	Forecasts	Visions
futures	possible, plausible futures	probable futures	desired future
framework	uncertainty based	based on certain relations	value based
approach to risk	highlights risks	hides risk	hides risk
information type	qualitative or quantitative	quantitative	usually qualitative
timeframes and levels of certainty	strong in medium to long-term perspective and medium to high uncertainties	strong in short-term perspective and low degree of uncertainty	functions as trigger for voluntary change
usage	rarely used	used daily	relatively often used

**Table 1** | A comparison of the characteristics of scenarios compared with more commonly used futures thinking tools for organisational purposes

famously by Shell International to inform their commercial activities. The scenario planning process has since been credited with helping Shell anticipate the fuel crisis of 1973 (lifting their ranking from tenth to the second largest global oil company at the time) and helping plan for a post-oil economy back in the mid-1970s.

Outside the corporate sector, the Mont Fleur Scenarios were developed in 1991-3 to

help South Africa navigate the transition to a post-apartheid democracy. Within this social context, scenarios proved their ability to help build relationships and mediate conversations about the future of a country between incredibly diverse groups of stakeholders (refer to Appendix 1 for more detail). Since these early examples scenarios have continued to be employed as ‘simulation models of future environments which ... permit various policy alternatives and their consequences to be investigated’ (Bradfield *et al* 2005: 798).

### So what are scenarios?

Scenario planning is “the combination of scenario analysis and strategic planning ... aimed at systematically exploring alternative lines of development in the outside world and their consequences for your own industry (or organisation)” (Lindgren & Bandhold 2009: 187) where the scenario is “a full description of a future state and the path to that future” (Lindgren & Bandhold 2009: 186) Scenarios are hypothetical stories of what the future could be and scenario planning is the process of using those stories of the

future to help inform decision-making processes today.

Unlike the vision statements that many organisations use today, scenarios require a narrative based on the logical effects that agents of change can produce over time, and unlike forecasts which rely on quantitative data, scenarios are based on exploring and making meaning out of uncertainty rather than hiding it (Table 1).

## Probable, possible and preferable futures

As noted earlier by Keene “Experience suggests that it is invaluable for a group to take the time to look as far ahead as it can, and to generate imaginative views of where it would like to be in the future” (Keene 2002: 176). Futures language uses specific terms to describe the nature of futures based on the qualities

of certainty and value ascribed to them. What Keene describes as “imaginative views”, futurists would call possible and plausible futures. Keene’s future that we “would like”, futurists would term the preferable future. Figure 3 “The Futures Cone”(Voros 2001: 16)<sup>3</sup> depicts scenarios as snapshots of any number of the multiple pathways that fall within our understanding of possible futures.

The future that is most likely to occur is termed probable and this is the future that most people plan for. Based on the long-term trends outlined in the introduction of this paper the probable 40-year future of the conservation profession would be: continued growth of the number and size of

<sup>3</sup> Futurist Joseph Voros has since added to this the ‘preposterous’ future – those futures which to the majority are all but incomprehensible. In risk analysis terms, these tend to be those risks that are not evaluated since they sit outside the readily plausible and yet history is defined by them e.g. September 11 attacks. Similarly, they are the dreams that mark the visionary e.g. landing the first man on the moon.

conservation studios in both the public and private domain; continued growth in the number and size of collections; continued specialisation of the cultural heritage industry; increased reliance on computer technologies for all our documentation needs; and exponential growth in the materials used for the production of art and material culture etc. Intuitively many of us feel that such a forecast may not necessarily be the case (or prefer it not to be). We suppose that some of these trends will continue their course but others are likely to be altered by external agents of change, including our own efforts to influence them.

The aim of scenario thinking is to expand business-as-usual thinking to incorporate alternative futures beyond the probable. This means taking a broader view of the profession by looking from the outside in,

rather than the inside out and accommodating both low-probability events that could have a high impact on the profession such as natural disasters or cultural terrorism and emerging issues that sit at the fringes of the Futures Cone, for example the impacts of

biotechnology and GNR (genetic engineering, nanotechnology and robotics).

## But what is the use of a story?

Stories help to simplify large amounts of information in a format common to human communication and understanding. As Futurists Lindgren and Bandhold note, thinking about uncertainty and the unfamiliar is a mentally exhausting exercise. It requires the brain to build new synapses as it creates fresh pathways of thought and memory. This is a costly exercise in terms of energy used and so we seek information that reinforces that which we already know rather than constantly challenge our perceptions and prejudices (Lindgren & Bandhold

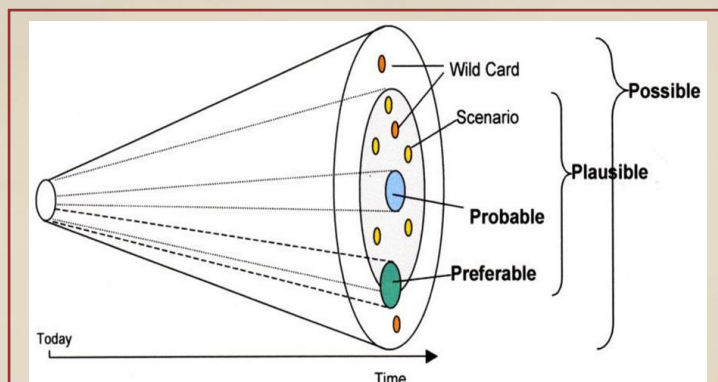


Figure 3 | The Futures Cone

2009: 125). Stories help to frame such challenging information in a way that the brain finds easier to work with.

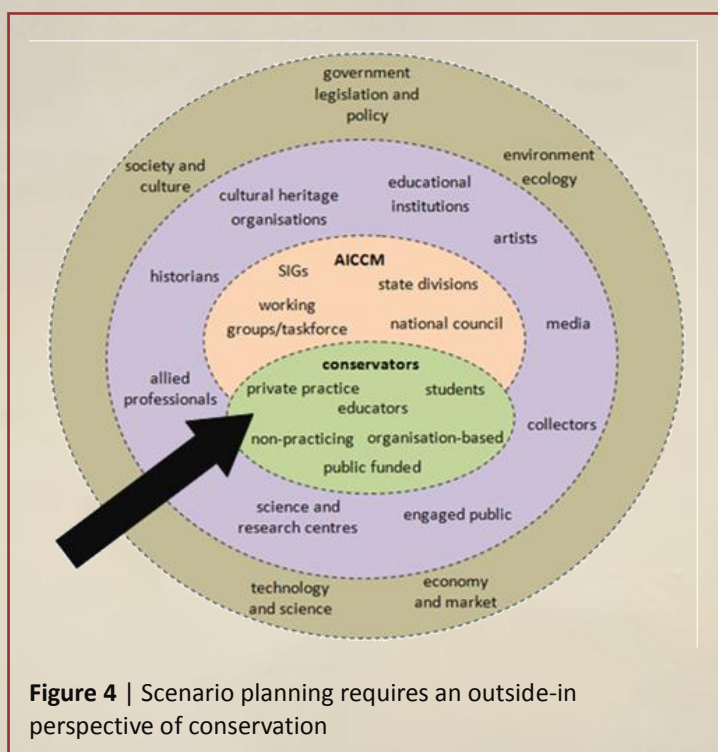
Humans are natural story-tellers and scenarios can act as a powerful tool to make meaning out of numbers. Given the imaginative capacity of the brain and its preference for visual and verbal communication, well-articulated scenarios can help manage uncertainty by reducing the complexity of the changing system into a simplified form. Stories have long been the method for transmitting human understanding and values thus scenarios serve as the nucleus for broader conversations that consider the potential implications of, and possible responses to change. They can provide a group or organisation with a common language and concepts for discussing current events and exploring uncertainties. However the scenarios themselves are not the whole story, they are part of the wider process of shared learning and exploration that is scenario planning.

## THE SCENARIO PLANNING PROCESS

*...if one wishes to estimate the possible condition of an artefact some time in the future, it is important to understand whether the changes that have already taken place are likely to continue at a steady pace, apparently slow down, or seriously speed up in time. (Robert Feller, Conservation scientist) (Feller 1994: 95).*

Returning once more to the analogy of conservation, best practice conservation relies not only upon treating damage and deterioration but features critical analysis and interpretation of possible causes of deterioration to help inform preventive conservation measures and disaster planning. It takes a position outside the artefact to predict and accommodate for changes in the broader external system that includes ambient environmental conditions, human interaction and potential disasters. This requires a systematic process of looking, evaluating and interpreting change before taking effective action.

Similarly, strategic planning involves an outside-in view of an organisation, in our case the AICCM and the conservation profession (Figure 4). Just as external agents of change can influence the future of an artefact, so too agents of change outside the conservation system can affect the profession. The aim of the scenario story is to articulate what those variable rates and combinations of social,



**Figure 4 |** Scenario planning requires an outside-in perspective of conservation

technological, environmental economic and political changes may look like in time. Ideally, they are coherent, logically robust, challenging and compelling hypotheses of how change unfolds to create future states. In helping catalyse the implications of change, scenarios provide a basis for better informed decision-making and planning in the present.

### Scenario methodology

Just as the term 'conservation treatment' implies a set of procedures that includes examination, documentation, analysis, stabilisation, restoration

and evaluation that is adapted to and executed in accordance with the needs of the artefact and resources available, 'scenario planning' refers to a broader futures thinking process with the flexibility to adapt to the requirements of the group or organisation. Though described as the scenario planning method, there is in fact no one, universal means of undertaking scenario planning. There is however, a large body of literature that describes the range of approaches to, and history, aims, and examples of, scenarios planning.<sup>4</sup>

The following methodology is adapted from Voros (Voros 2003: 14) and provides a systematic process for engaging in strategic planning.

### 1. Defining the problem

This requires deciding with what it is that we are concerned. It asks the question "What issue do we want to explore?" Examples for conservation may include: "How will the skills base change over the next 10-20 years?" "Who will control or manage cultural heritage resources?" "What role will the AICCM play in the future?" "How will people engage with artefacts?"

### 2. Gathering inputs

This involves collecting information about agents of change in the wider environment. This is done by searching conventional and alternate media forms, interviewing senior conservators for their insights and intuition regarding the broader system dynamics<sup>5</sup> and drawing upon research in journals and publications etc. It requires looking broadly enough to incorporate emerging issues but should largely be based on authoritative sources for validity.

### 3. Undertaking analysis

This means ordering the vast amount of information collected into a more meaningful or concise way in

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<sup>4</sup> For a brief overview see Lindgren *et al* (2009) and Wright *et al* (2011)

<sup>5</sup> The method of interviewing a range of experts across a given field is more commonly termed a Delphi survey in the futures literature with reference to the Oracle of Delphi in Greek history.

the form of trend graphs (for example those provided by the Australian Bureau of Statistics) or STEEP analysis.<sup>6</sup> It asks the question "What seems to be happening?" Conservation examples could include: "Are conservation employment opportunities really growing?"<sup>7</sup> and "What evidence is there of growth in our collections?"<sup>8</sup>

### 4. Critically analysing the information

This is done to determine if there are any deeper structures or insights by considering not only first but second and third order implications. It requires asking the question "What's really happening?" The conservation example might be "If conservation jobs are really growing, in what areas are skills sought and has this changed over time?", "Is the nature of the profession changing and if so, is this something preferable?", "What is the material make-up of the growing collections and how will this affect conservation practice?", "Is this growth a short-term or long-term trend?", and "Who or what is driving collections growth and is this part of a larger ongoing cycle?"

### 5. Creating the scenarios

This involves exploring and developing alternative futures as coherent, logical and compelling stories that ask "What might happen?" The scenarios should provide a map or framework of a futures setting that allows us to temporarily inhabit a given futures space. There is a vast array of scenario development methods that are used to generate scenarios however

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<sup>6</sup> STEEP analysis is the process of dividing agents of change under social, technological, environmental, economic and political drivers. Refer to Appendix One for an example.

<sup>7</sup> 2011 data from the Australian Government Job Outlook website projects that growth for archivists, curators and records managers will 'grow moderately' over the next five year period whilst conservators (who are included under 'Other natural and physical science professional') will 'grow very strongly'.

<sup>8</sup> Keene notes that growth in UK social history collections in particular are reaching almost exponential proportions (2002: 14). This has huge implications for collections management resource allocations.

the explanation, comparison and evaluation of these are outside the scope of this paper.<sup>9</sup>

## 6. Discussing the implications of the scenarios

This stage involves testing strategies or policies for robustness against these potential futures by asking “What might we need to do?”, however, this is also inadvertently the step where group learning is most effective as discussions lead to the transmission of knowledge and formation of group norms and understanding.

## 7. Defining a course of action

Having undertaken such comprehensive analysis we can now begin asking ourselves “What will we do?” and “How will we do it?”

When carried out over a period of time, scenario planning becomes an iterative learning process that provides a tool for more effectively considering, monitoring, evaluating and managing the impacts of change upon conservation practice and the AICCM. But who should be responsible for carrying out these activities?

## Participatory engagement and group learning

As noted earlier, practical discussions about the future of conservation are generally broached by a small number of senior conservation professionals who have the expertise and experience required to make sense of such complex issues. However unless opportunities are engineered to facilitate the sharing of this knowledge (e.g. via conferences such as this and mentoring programs) or the necessity to confront these issues presents itself for each individual (for example working in senior and conservation management roles), the ability to develop this expertise or critical thinking across the profession and AICCM is less likely to occur.

Reliance upon a handful of individuals to deliver a vision of the future of the profession with its diverse

<sup>9</sup> An overview of these are outlined in Bradfield *et al* (2005) and Bishop *et al* (2007).

range of members may in itself create a number of problems as:

- AICCM becomes reliant upon a few key individuals for its viability;
- the broader membership may not support or commit to the execution of a given project due to a limited understanding of, or belief in, the future proposed;
- each individual carries their own biases or mental models and reliance on a few individuals may create a false representation of the goals of the broader profession;
- it impedes the ability for the organisation to develop an on-going learning process by localising understanding with key individuals and once these key individuals move on, the initiatives they championed or established are apt to fail.

Scenarios are not an end-point in themselves but one aspect of an evaluative and adaptive learning process. This process should be led by management (or in the instance of the AICCM, the National Council) but by engaging those responsible for helping bring the preferred futures to fruition, are more likely to be carried out. If the process of scenario planning is shared or undertaken collectively, knowledge grows. As Keene notes “the value (of strategic planning) will lie as much in promoting institutional learning and a shared mental model of what could or should be done and how, as in the superior plans produced. Whether the techniques come by diktat from above or by involving staff at all is more important than which method is employed” (Keene 2002:176).

## ADVANTAGES, DISADVANTAGES AND IMPLEMENTATION OF THE SCENARIO PROCESS

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### Advantages

This paper has touched on various aspects of scenario development that make it a highly useful tool to help

conservators and the AICCM approach thinking about the future. They are:

- the development of several different versions of the future that train us to keep thinking of the future as full of possibilities rather than a single predestined future;
- the articulation of several different futures provide us with maps by which we can track and monitor change in a more proactive way, having already identified what could change and potential consequences;
- the framework it provides for developing critical thinking and reflection as we analyse, hypothesis and revise what conservation means within a changing world, whilst considering what is timeless and what it is we can change;
- the collaborative and conversation-based process that facilitates idea sharing;
- the use of stories that enable both qualitative and quantitative aspects to be incorporated so that ideas are not excluded on the basis that they cannot be measured;
- its ability to accommodate differences rather than seeking consensus.

## Disadvantages

It will be obvious to many at this point that the primary disadvantage of the scenario process is the commitment of time and resources required to execute the process effectively. Shell International, who began using scenario planning in the late 1960s in the face of major change in the energy sector are leading proponents of its use in corporate planning. From their experience they note that *“scenarios are most useful if they are used systematically over a period of time - to craft the ongoing strategy of an organisation, to challenge assumptions, and test plans and strategies - rather than just once in response to a particular situation.”* Additionally, *“in a constantly changing world, no single set of scenarios can remain relevant or useful (indefinitely)”* but require the commitment for revision every 3-4 years as business cycles change (Shell 2008a: 87).

The main disadvantages of the process can be summarised as:

- developing scenarios is a lengthy process that does not suit those who seek immediate results;
- scenario development processes are usually facilitated by an external professional which would require financial investment to execute;
- scenarios will always contain some degree of ambiguity that may not suit those who expect clear, concise pathways to the future;<sup>10</sup>
- the over-reliance on empirical data to develop the scenarios could obscure non-empirical factors, which tends toward forecasting (Table 1);
- conversely the scenario process can be seen as an exploration of free-floating ideas that is difficult to translate into planning activities, unless rigour is invested in understanding how the dynamics between different drivers actually occurs (Slaughter 2002: 28).

Undertaking scenario planning would require an ongoing commitment of time and resources for it to be of use to the profession. To some extent, a long cycle of broader professional examination is already evident by the conference themes explored over the AICCM history. This began with the 1976 ICCM National Conference, which presented us with some of the clearest possible futures for our profession<sup>11</sup> and was revisited in the 1990 Conference in Tasmania with the theme, *“Where does conservation sit within the wider community?”*

This is not to say that conservators do not think of such issues in the intervening years but that the exploration of broader and deeper themes have been addressed intermittently and haphazardly, without a consistent framework of intention and shared reflection. The difficulty also arises in ensuring that these types of conversations are not forgotten as the decades roll on but that the outcomes of conferences such as this remain active over the coming years,

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<sup>10</sup> For short-term quantitative projection of the future that require a high level of certainty, forecasting is a more commonly used tool

<sup>11</sup> Some of these futures have become realities, for example Institutional Laboratories whilst others have failed to crystallise in their intended form, for example Central and Regional Laboratories. One aspect of scenario planning is trying to understand what external conditions assisted and/or prevented these futures from eventuating.

embedded in conservation practice rather than being overlooked for the more immediate daily concerns of materials treatment and research.

## APPLICATION FOR CONSERVATION AND CULTURAL HERITAGE

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Conservation regularly uses scientific trend analysis for managing the physical state of artefacts. Similarly, many conservators have experience in developing Visions Statements either for their own conservation departments or as part of the larger organisation. However, the use of scenarios for conservation is absent.<sup>12</sup> Within the broader cultural heritage context, a number of international organisations are adopting scenario planning to help navigate the increasing complexity that the 21<sup>st</sup> century brings. The most active of these appear to be American Association of Museums' Center for the Future of Museums (CFM) and The Association of Research Libraries' Transforming Research Libraries' Division (ARL-TRL).

The CFM in particular have produced three documents outlining museums related trends and sets of scenarios based on these for use by museum professionals.<sup>13</sup> CFM Director Elizabeth Merritt notes that the scenario development workshops that CFM has undertaken with museums staff and stakeholders to date, have stimulated new ways of thinking about the future for these organisations (Merritt, E. pers. corr. 16.09.2011). In addition to this, the sets of scenarios developed by the CFM have formed the basis for discussions that a number of museums staff and museums boards have used towards the

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<sup>12</sup> The field of environmental conservation has more readily adopted scenarios as a tool to help articulate the future states of natural resources. The key benefits for its application in this field are "to assist with decision-making and increased understanding of key uncertainties; the incorporation of alternative perspectives into conservation planning, and greater resilience of decisions to surprise" (Peterson *et al* 2003: 358).

<sup>13</sup> These documents are: [Tomorrow in the Golden State: Museums and the Future of California](#) (2010), [Demographic Transformation and the Future of Museums](#) (2010) and [Museums & Society 2034: Trends and Potential Futures](#) (2008)

development of strategic plans. They include the [Valentine Richmond History Center](#) and the Museum of Northern Arizona.

Within Australia, the only notable scenario sets for cultural heritage institutions are [The Bookends Scenarios](#) developed for the State Library of New South Wales. The project involved several workshops, interviews and group discussions of over 150 public library staff to help develop a set of four scenarios, representing different directions for NSW public libraries. Frances Sims, Director of Public Library and Community Learning Services notes that "All four scenarios identify new opportunities and unforeseen risks associated with the future environment in which public libraries operate" (State Library of New South Wales 2009: 4).

For the purposes of this paper an abridged step-by-step example of what a scenario planning process for conservation futures could look like appears in Appendix 2 with thoughts on how to incorporate scenario planning into AICCM activities in Appendix 3.

## CONCLUSION

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*The practical importance to the conservator in realizing that a particular deterioration process tends to speed up in time is to emphasize noticing the process and initiating treatment at the earliest possible stage, catching potential trouble at an early point in time. (Robert Feller, conservation scientist)*

(Feller 1994: 95).

*The goal of forecasting is not to predict the future but to tell you what you need to know to take meaningful action in the present. (Paul Saffo, futurist)*

(Saffo 2007: 1).

An aspect of wanting something to be around in the future relies on perceiving something valuable in it in the present. As conservators we understand this of our artefacts but do we feel as strongly for our profession or the practice of preservation and collections care? Will we need conservators in 2021,

2061 or the year 3011? Are there things that we see happening at the edges of our professional perspectives that need further investigation and action so that the next generation of conservators will think “*Thank goodness they had the foresight in 2011 to...*” or will it be “*If only*”?

As the keepers of cultural heritage, conservators caring for museum, archive, library and gallery collections assist in sustaining cultural memory. The coming decades will not only bring great change via technological, economic, political and social transformation but will also bear witness to deep changes in our understanding of and relationship to culture and the environment. By understanding and working with change as a constant, rather than approaching the future with a business-as-usual perspective, conservators will be in a better position to ensure their effectiveness and relevance in a changing environment. It is only through being proactive towards change that conservators can influence the future they prefer both for the artefacts for which they care and the profession. This will involve important professional conversations at the individual, institutional and organisational levels.

The trends and scenarios presented in Appendix 2 of this paper provide a starting point for such a discussion. When used in conjunction with the content and research from other papers at this conference and added to over the coming months and years, it will broaden our vision of the role of conservation in a dynamic environment. Much more work needs to be done to frame the practice of conservation and collections care using a wider lens of time looking both forward and back to map trends through time. Given that the aims of our profession is conserve and preserve artefacts for future generations, it is imperative that we not only monitor and manage the physical environment through scientific analysis but cultivate a professional dialogue and implement practical frameworks to navigate the broader social drivers of change. This will ensure that the artefacts for which we care can be enjoyed by a healthy and viable future society.

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## APPENDIX I: SCENARIOS CASE STUDIES

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The following section presents two of the best known case studies of applied scenario planning practice: The Mont Fleur Scenarios developed for the South African Government in 1993, and the on-going work of Shell International (mentioned above) as a means of highlighting the outcomes of the scenario process.

### Shell International Scenarios

Shell International is considered the leading corporate advocate for the strategic planning process. They incorporated scenario practice as their key strategic planning tool since the 1970s following suggestions from a number of their strategic planners in the late 1960s “thinking six years ahead was not enough” (Lindgren & Bandhold 2009: 38) and so produced a ‘Year 2000’ study. Interest in scenario planning as a practical futures thinking tool grew following Shell’s ability to pre-empt and plan for a number of energy risks and opportunities that many of its competitors had not fully anticipated. This included a rise in oil prices in the early 1970s, following the stable low price period of the 1960s, which eventuated in the fuel crises of 1973. They have subsequently used scenario planning to discover and explore the opportunities afforded by the opening up of previously inaccessible countries during the 1990s and inclusion of renewable energy resources into its portfolio (Shell 2011: 6).

### The Mont Fleur Scenarios

The Mont Fleur Scenarios were used to help transition South Africa into a post-apartheid nation. They represent the first major use of the scenario tool across such broad a scope for non-corporate purposes (Kahane 1992: 1). South Africa had previously used scenarios (the 1987 Anglo-American Scenarios and the 1991 Nedcor/Old Mutual scenarios) as tools for decision-making that many believed correctly identified the key issues facing the country and offered new thinking for possible ways of dissolving the South African *problematique* (Spies

1994: 964). The participative nature of the scenario process and the use of the narrative for its dissemination meant “no single planning exercise gripped the imagination of the South African population as much as the Anglo American scenarios of 1987” (Spies 1994: 984).

The Mont Fleur Scenarios were first devised in 1991 and following an intensive period of analysing social, political and economic issues confronting South Africa, were published in 1993. They initially comprised of 30 stories about how events might unfold over the next decade, which included stories of “revolution, right wing revolts, and democratic, free market utopias” (Gillespie 2000: 34). These were further evaluated for plausibility and consistency before being reduced to four possible futures for the country. Although it is impossible to quantify the impact the Scenarios had on the country it is obvious “that their narrative power was so compelling that they caused everyone from the radical African National Congress to the crypto-fascist National Party to agree objectively that they were accurate descriptions of the possible future realities” (Millennium Project).

## APPENDIX 2: SCENARIOS FOR THE FUTURE OF CONSERVATION

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The following scenario development process offers an example of how this methodology could be applied for AICCM purposes. It is important to reiterate that such a process would ideally include the input of ideas from a broad spectrum of conservation professionals.

### Defining the problem

Given the limitations of developing scenarios by an individual, the following set of questions are largely influenced by my role as an institutional conservator, however attempts have been made to broaden their relevance to private and educational conservators. Questions to pursue are:

- is conservation important in this future, and if so how and why?
- who are the employers of conservators in this future?
- who is in charge of cultural heritage in this future?
- how do people engage with cultural heritage in this future?
- what type of skills are valued by conservators in this future?
- what can we do to prepare for or prevent this future?

### Gathering inputs

We gather information about what changes may be occurring every day in focused and wide reading, professional and informal conversations and our general observations of the environment and world around us. However, as individuals we need to be mindful that we are inclined to seek out information with which we are comfortable, thereby reinforcing our beliefs. Of greater difficulty, is looking beyond the familiar to trends that we do not expect to affect the profession by considering the potential effects of emerging trends and wild cards. We must try to

broaden our perspectives beyond our comfort zones. Table 2 outlines a range of quantitative and qualitative trends unfolding across Australia as well as some collecting institutions abroad and their impact upon the cultural heritage institutions.

### Creating scenarios: Conservation 2030

The following three seed scenarios provide hypothetical stories of the future roughly twenty years from now. They are based around the trends and impacts from Table 2. They describe how these changes might unfold and suggest what these changes might mean for conservators and the collections they care for. These scenarios present a range of alternative futures that should not be judged on their predictive value with “Yes this will happen” or “No, that could never be!”, but are best approached with an open mind of exploring “What if?”

#### The Great Release

Key drivers of change:

- slow economic growth due to global market volatility and the transition of an Australian economy from a resources and manufacturing base to a service industry base;
- withdrawal of government funding and growing reliance upon philanthropic revenue sources;
- social shift toward re-localisation and community.

The monthly renewal of information and communication technology plus the costs of treating and storing ever more varied, complex and inherently unstable collection material and the exponential growth of acquisitions have become the biggest financial obligations of institutional collections. Under the burden of rising costs, several state and regional museums and galleries close their collections between 2017 and 2021.

Across Australia, the economic stagnation that had started in 2011 and was relieved by the biotech-boom of 2019-23, gave way to the stagflation of 2024 as the country confronted a post-mining economy. Philanthropic funding, upon which the sector has come to rely after recommendations made in the 2012 National Cultural Policy, dries up. However revised de-accessioning policies in museums management alleviate some of the pressure. Works deemed of low significance and problematic in nature are offered on the market. Nevertheless, a call for 38% redundancies is enforced across government institutions in 2028.

In the social domain, localisation and co-opting have established a new market economy. The rise of de-accessioned artworks spurs growth in private and co-operative collections. Conservators (92% now consider themselves self-employed, working between private practice and contract and casual work) form co-operative conservation labs to alleviate high overhead costs and professional isolation, thus creating centralised cultural heritage skills centres. In addition to treatment, many of these labs now advocate for and teach materials management and 'lost trades'. This feeds into the booming market of the 'Thing-ers' who, in the vein of the 2010s 'Maker Movement' and the 'Arts and Crafts Movement' over one hundred years before, return to the comfort of tangible artefacts in what has become an ever more virtual and dissociative world.

### **GaME on**

Key drivers of change:

- gamification of education and cultural heritage experience;
- growth of commercial activities within the GLAM (Galleries, Libraries, Archives, Museums) sector;
- consolidation of and controlled access to the valuable cultural resource;
- increasing risk of damage by both natural disaster and terrorist attack.

Following several sizeable donations from technology entrepreneur Joy Bruce of PastVark in 2019, the Gallery and Museum Enterprise of NSW (GaME NSW) was able to digitise and 3D scan its collection of over 18,130,000 items by 2024. This allowed GaME NSW to set new benchmarks for collection access through both the development of its on-line content and introduction of its haptics<sup>14</sup> technology lab, facilitating visually impaired access to gallery and museum collections.

As the exhibition spaces have had to make room for immersive art experiences to feed the growing demand for sophisticated edutainment, the collections and the conservators who care for them have been sequestered away to stores across several cities in regional NSW (including Mudgee and Temora) where the risks of natural disaster and cultural terrorist attacks are reduced and land values are lower.

Collection items are highly valued as research reference material from which biological samples are available for purchase by commercial enterprise. This has become a key source of income for GaME NSW along with accurate 3D reproductions of collection material. A growing push for no intervention as well as the ubiquitous use of 3D scanning and rapid prototyping has seen the conservator role specialise into two streams; that of cultural heritage scientist (CH scientist), focused on analysis and research and that of cultural heritage analyst (CH replicator) focused on 3D documentation; database management and assisting in the development of accurate virtual experiences.

### **Conservation 2030: Museogora**

Key drivers of change

- rise of volunteerism
- cultural renaissance with increased community and corporate engagement

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<sup>14</sup> Haptics technologies are based on touch as the primary communications interface, allowing people to hold and manipulate objects in virtual space using a glove or remote sensor.

Following the ongoing success of the MWM Blockbuster series through the first half of the 2010s and with its commitment to broaden visitor access, in 2017 the National Museum of Victoria (NMV) not only lengthened its visiting hours to 24/7 but expanded its activities. The move was made possible by a sharp increase in volunteerism from both the highly skilled and retired Baby Boomers working by day and PhD-wielding yet unemployed Millennials working nights. Greater rates of participation and community engagement see museum attendance rise to new heights.

As the NMV recognises the importance of a thriving arts and culture sector, functions expand in the early 2020s to incorporate learning, creativity and exploration in all its guises including concerts, rallies and protests. The museum now also offers tertiary education in museum, culture and heritage studies in partnership with RMIT and has in conjunction with CSIRO, converted the green spaces around the buildings into botanical arks.

In 2028, miniNMV and mobileNMV units spread into corporate Victoria as collections are loaned to businesses to furnish the Culture and Recreation (CaR) spaces they create within their buildings. This commercial activity helps to finance the growing collections management needs including the recurrent treatment of artefacts, made necessary by frequent transport and display. The demand for more efficient remedial treatment grows and is assisted by advances in nanotechnology and molecular engineering that allows for targeted regeneration of areas of material weakness or loss.

### **Discussing the implications**

The questions outlined at the beginning of the scenario development process provide a starting point when considering the potential implications of each of the scenarios for the profession to help inform your own personal or organisational activities. Additional questions that help the group determine what common desirable outcomes and futures would include:

- is this future possible, probable, preposterous or preferable?
- what can we do to prepare for or prevent this future?
- what can I do to prepare for or prevent this future?

### **Defining a course of action**

The intention of scenarios planning is not prepare for one future but develop policies and processes that will be robust in many futures and create specific plans to deal with potential risks or take advantage of opportunities. Using the questions outlined above, discussions should then focus on generating explicit strategies or activities to deal with each of the scenarios from which to draw common themes for action.

	General trend	Impact on collections and collecting institutions
Social	ageing population	spaces and exhibitions designed for access; tightening of government funding with fewer working population able to support aged; rise in volunteerism as Baby Boomers remain active in retirement years
	globalisation	transnational audiences and re-emphasis on localised relevance (Müller 2008: 7); reconsidering conservation practice to accommodate alternative cultural perspectives beyond the Western lens
	fragmentation, specialisation and rapid change	cultural heritage (CH) institutions act as unique centres for shared memory; arbiters of 'common knowledge'; museums as centres of retreat (Centre for the Future of Museums 2008: 19)
	growth of participatory engagement	visitors and community driving narrative (Hooper-Greenhill 2000)
	continuing role of evidence-based research	continued specialisation of the industry; developing scientific capacity; computer-modelling of 'collection value over time' (Michalski 2008)
	growth in services sector (Hajkowicz et al 2010)	increasing importance of commercial activities within institutions
	increased attendance to museums and galleries (Forrest 2011)	growing support for activities
	growth of Asian Middle class (Kharas 2010)	increased cultural tourism; increase in number of loans to Asian countries; growth in Asian art market; and value of Asian collection items
Technological	access to information	gamification of museum activities (McGonigal 2009); will there be a tightening or loosening of controls over content usage and sharing?; growth in user generated content (Chan 2010) and a counter-trend of return of the expert? (Müller 2008: 7)
	new materials in artworks and rapid changes in technology	redundant technologies means redundant content for some collection items (Ashley 2008); some newer materials require greater resources for care; increasing costs to maintain status quo
	3D scanning and rapid prototyping	new ways of documenting and treating artefacts (Cignoni et al 2008; UCL Museums 2011); changes to skill base of conservation
	augmented reality and gesture-based computing	new ways of interacting with artefacts for wider audience inclusion (NMC Horizon Project 2010: 6); strengthens museums position as source for the authentic (Centre for the Future of Museums 2008: 14)
	nanotechnology and biotechnology	precision in material analysis, material development and engineering, targeted conservation treatments and better resolution of complex sample types (Max Planck Institute for Intelligent Systems 2009: 387)
	visual data analysis and semantic web	more comprehensive understanding of particular issues or activities e.g. mapping processes of deterioration (NMC Horizon Project 2010: 13; Graham 2004)
	continued global instability	restricted funding from government
Economic	rise of philanthropy	growth in collections; preferential development of collection areas based on desires of donor
	growth in number and size of museums and galleries	cultural renaissance or building for failure? (Bradburne 2009); fewer resources stretched between more organisations with growing needs
	emerging model of sustainability over traditional model of economic rationalism	could this include fourth pillar of sustainability? <sup>15</sup> recognising the relationship of culture to social health, productivity, innovation etc.
	free access to information e.g. Creative Commons	review of copyright law (NMC Horizon Project 2010: 9)
Political and legal	development of National Cultural Policy	impacts on governance and potential restructure of resource sharing and management frameworks
	political party support, disillusionment with current two-party model	Liberal focus on funding larger institutions and Labour preference for broader arts community; future alignment with minor parties and independents?
	introduction of carbon tax or similar	possible reduction of long-distance loans/exhibitions and visitor travel; redressing energy usage of facilities incl. widening of ideal environmental parameters and including passive controls (Staniforth 2011: 13)
Environmental	increasing variance in weather patterns (Hajkowicz et al 2010)	disaster preparedness planning (Cassar 2011: 11)

**Table 2 | STEEP analysis of drivers of change relative to collecting institutions**

<sup>15</sup> The 3 pillars of sustainability are: economy, society and environment. Hawkes (2001) argues for a fourth pillar to be added, that of culture which Hawkes defines as the transmission of values, meaning and purpose.

## APPENDIX 3: IMPLEMENTING SCENARIOS PLANNING IN THE AICCM

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### Scenario development at AICCM National Council level

At the AICCM National Council level, scenarios could inform not only the strategic plan of the organisation but provide an on-going assessment (for example every four years) of what conservators and the AICCM deem to be significant long-term issues and opportunities that face the profession. It seems obvious that the National Council would provide the platform to develop a set of scenarios for use and distribution but given the resources required to oversee such an activity it may more appropriately be conducted by a working group or taskforce such as the AICCM Blue Sky Group.

As noted previously, the key to organisational learning requires the involvement of the broader conservation community and as such the opportunity to both inform AICCM members and draw upon their knowledge should be a key factor in determining how to implement scenario planning. The option outlined below provides opportunities for the membership input and draw from the content generated.

### Scenario development through on-line forum

Given the geographic spread of the AICCM membership, the development of an on-line forum to share thoughts on trends and emerging issues could be a more effective means for engaging the broader membership than holding localised forums for discussion. This lessens the impact of time constraints and supports greater inclusion for those interested. The forum content could be used for input toward scenario development or strategic planning by individual and organisational members as well as the AICCM itself.

More elaborate forums of this kind have been developed for the broader museums profession

including the American Association of Museums Center for the Future of Museums, The Museum of the Future and in Australia, Museum 3.0<sup>16</sup>.

### Scenario development workshops at the State Division or SIG level

In August 2011, the AICCM Victorian Division held an 'Off the Record' session to focus on scenario development. The session was divided into:

- an introductory overview of what scenario development was before attendees were invited to describe different agents of social, environmental, technological and economic and political change that would probably impact the cultural sector; and
- scenario development based on the issues described in the first half, as groups of 3–4 wrote or drew possible futures for the profession. These futures were then presented to the wider group.

The evening was successful in gathering a broad cross-section of members and opening up the discussion to areas not commonly discussed across the Victorian Division membership. However, time constraints (each session ran for an hour) meant that although issues were identified, little time was available for more meaningful discussion about their impact on the profession. Similarly, there was no time to discuss the probability or preference for the six scenarios outlines developed.

Given the commitment of time and energy required to generate scenarios, it is more appropriate that both State Divisions and SIGs utilise pre-developed scenarios at the national AICCM level for their own planning purposes.

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<sup>16</sup> While there do not appear to be similar forums designed specifically for a conservation futures however emerging issues and broader issues relating to conservation are being discussed in a number of conservation related blogs including AIC's '[Conservator's Converse](#)' and Julian Bickersteth's '[Museum Musings](#)'