

Introduction to 4D-Mapping

4D-Mapping is one of the methods taught within MIT's Massive Open Online Course (MOOC) "u.lab: Leading from the Emerging Future". It helps groups see their situation collectively, challenging mental models to find non-obvious areas of leverage in complex systems.

The materials below briefly explain the importance of coming to grips with systemic implications and how this complexity can be simplified.

Peter Senge: Navigating Webs of Interdependence (5 minute video)

https://www.youtube.com/watch?v=HOPfVVMCwYg&feature=em-share_video_user

Peter's points of greatest relevance to 4D-Mapping include:

- Social groups, such as families or businesses, have complex interactions which often produce outcomes nobody wants. These can produce some of our most intransigent problems
- To find non-obvious areas of leverage we need to have a deep and persistent commitment to real learning. This requires:
 - Recognising we are part of the problem. We need to be committed to challenging our mental models - our way of seeing things, and sense of where leverage exists
 - Beginning to see collectively things no-one can see individually, gathering different people from different points of view who are seeing different parts of the system, and
 - Accepting it can take time to develop, adopt and apply alternative behaviour and approaches to address these areas of relatively high leverage
- Intelligence is always about systems, balancing the long and short term, and collective (not individual) intelligence

Eric Berlow: Simplifying complexity (4 minute video)

http://www.ted.com/talks/eric_berlow_how_complexity_leads_to_simplicity

4D-Mapping does with human beings what Eric does with data points; It helps us step back and visualise the key relationships in a complex system, finding simplicity on the other side of complexity.

4D-Mapping helps groups see their situation collectively, challenging mental models to find non-obvious areas of leverage in complex systems

Science and 4D-Mapping

While 4D-Mapping has been shown to deliver rapid insights into complex systems, the science to explain how it works is still emerging. One element of the method is the deliberate tuning into intuitive or unconscious knowledge held within the body, in particular the heart and gut. Scientists such as Dr J. Andre Armour and M.D. Michael D. Gershon have proven we have functional brains in our hearts and guts as described in the following extract:

Neuroscience and the Cardiac and Enteric 'Brains'¹

Over the last decade or so, the field of Neuroscience has uncovered some intriguing findings that give support to the ideas that true leaders use all of the intelligence available to them and go well beyond that of just their head brain.

Starting with his pioneering research on neuro-cardiology, Dr. J. Andrew Armour introduced the concept of a functional brain in the heart. His work revealed that the heart has a complex intrinsic neural network sufficiently sophisticated to qualify as a 'brain' in its own right. The heart's neural network meets all the criteria specified for a brain including several types of neurons, motor neurons, sensory neurons, interneurons, neurotransmitters, proteins and support cells. Its complex and elaborate neural circuitry allows the heart brain to function independently of the head brain and it can learn, remember, feel and sense.

Following on, in 1998, Neurobiologist and M.D. Dr. Michael Gershon published his pivotal book, 'The Second Brain', in which he described the culmination of over a decade of research and discovery that the gut also contains a complex and fully functional neural network or 'brain'. The gut brain, also known as the enteric brain, contains over 500 million neurons and sends and receives nerve signals throughout the chest and torso and innervates organs as diverse as the pancreas, lungs, diaphragm and liver. The gut brain is a vast chemical and neuro-hormonal warehouse and utilizes every class of neurotransmitter found in the head brain. Research has shown that the gut brain can learn, store memories and perform complex independent processing."

¹ Taken from "[Neuroscience and the Three Brains of Leadership](#)" by Grant Soosalu and Marvin Oka
www.threefoldconsulting.com.au and www.andreburki.com.au

Client feedback on 4D-Mapping

“We started with a warm-up exercise to prepare us for the 4D-Mapping approach. Unexpectedly this gave me amazing relief from the stiffness and pain I experience due to Parkinson’s disease. But this was just the first positive outcome.

4D-Mapping proved a very time-effective, direct and accurate way to get insights into what was going on our organisation. The authenticity and accuracy were extraordinary. Just to mention an example: While I as the founder was watching the process, I could hear the person representing me saying what I was thinking. His experience of my role was in complete unison with my own.

Letting go of my leadership role was a very difficult thing to do as the Executive Director, founder and now ex-owner of a business I have run successfully for 23 years. But after watching the crew form a common view of the present challenges and necessary next steps, combined with a strong willingness to take action, I feel more able to relax and step back.

This process induces honesty and a willingness to share thoughts, with vastly reduced inhibitions about potential consequences. We gained tremendous value from the accurate insights into the opportunities for the company. The level of participation was magical as everyone was extremely engaged.

This was the most impressive consultancy experience I’ve ever had in my many years of being in the consulting business myself.”

*Colin Hendrie, Founder and outgoing CEO – Outback Initiatives
Ex-Rhodesian army officer and Omani Special Forces squadron commander*