

kinetik solutions



agility to sustain change

RSA

21st century enlightenment

RSA Creativity in Public Services Network

Steering group members – Helen McGarry, Paul Neville, Neil Reeder and Martin Wheatley

RSA Creativity in Public Services Network Event

TRIZ for Creativity

Neil Reeder
Ketan Varia

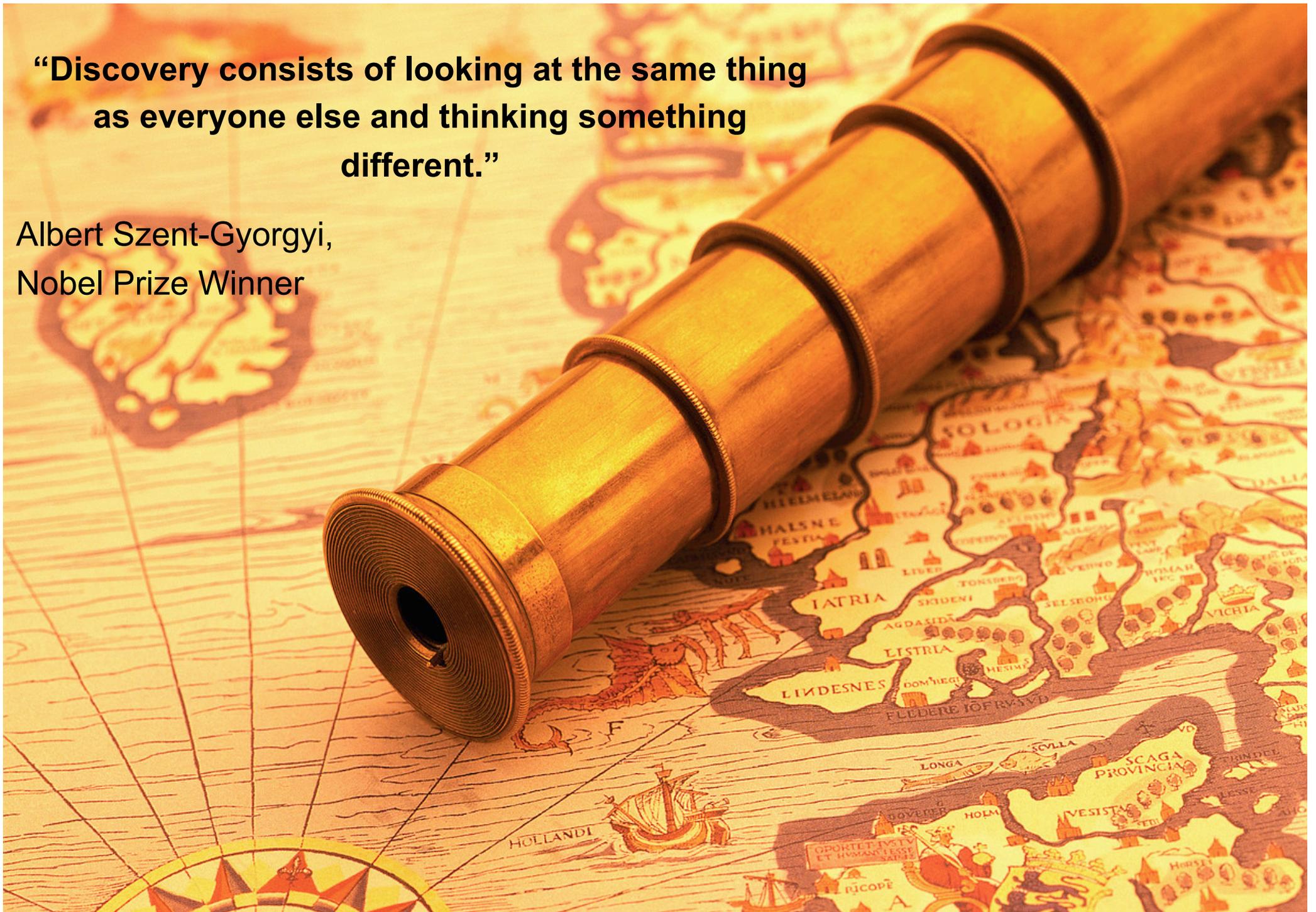
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W: www.kinetik.uk.com | E: bebetter@kinetik.uk.com | T: 0203 397 0686

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**“Discovery consists of looking at the same thing
as everyone else and thinking something
different.”**

Albert Szent-Gyorgyi,
Nobel Prize Winner





A little about me.....

- **Currently a School Governor at a local comprehensive**
- **Non-Exec Director for a large hospital 2005-2009**
- **Practicing Pro Bono Mediator for neighbourhood disputes**
- **Director of a boutique management consultancy
specialising in operational excellence/change management**



Agenda

Explanation of TRIZ concepts
The TRIZ card game and an example
Workshop to test your service issues with the game
Plenary
Close

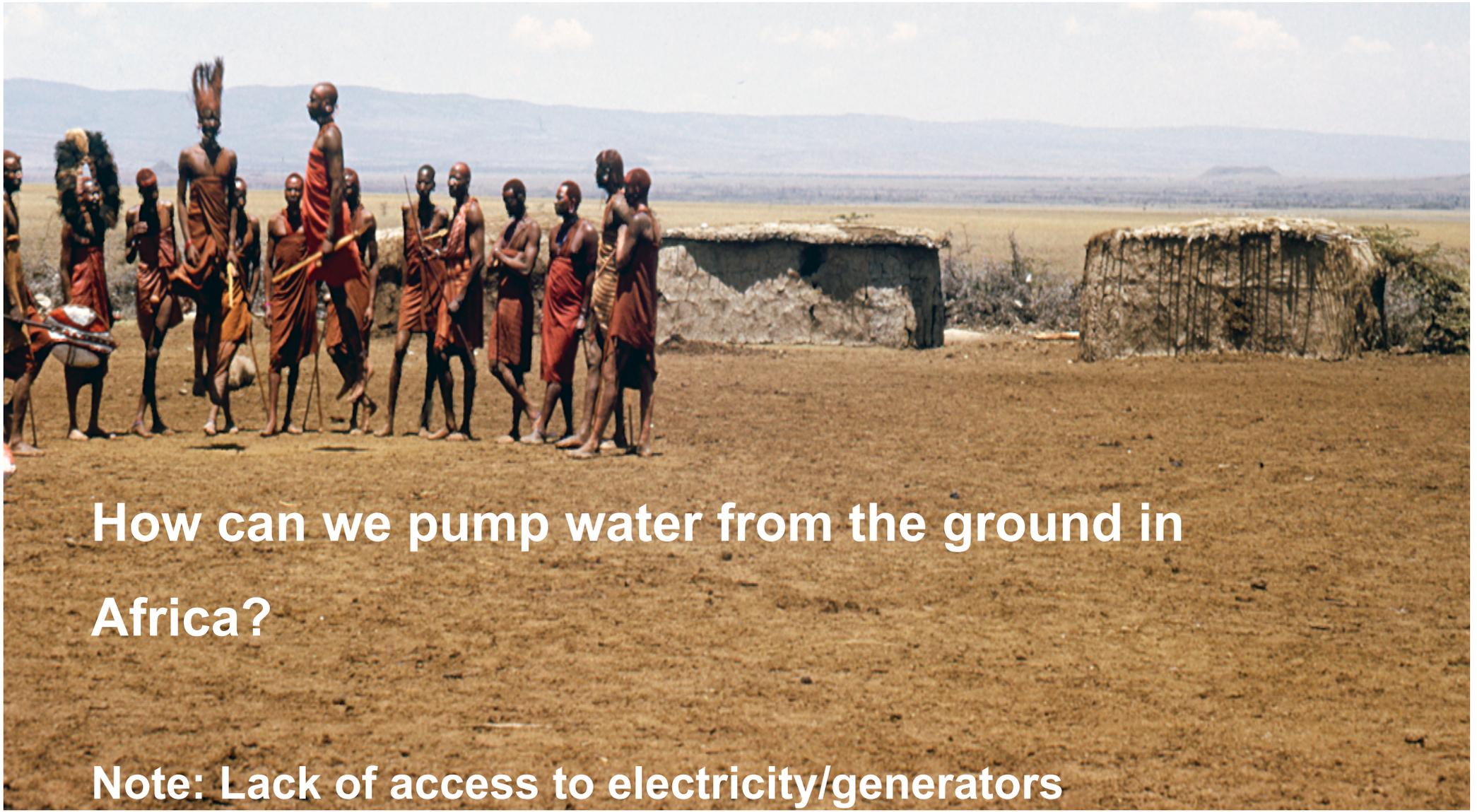
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Rural Africans need access to water!



How can we pump water from the ground in Africa?

Note: Lack of access to electricity/generators



Being resourceful in Africa: the “play pump”



Source: <http://www.waterforpeople.org/extras/playpumps/case-foundation-partnership.html>

“I became more and more interested in the mechanics of creativity. How were inventions made? What happens in the head of the inventor?”

Genrich Altshuller – Creator of TRIZ



What is TRIZ?

- An armoury of problem definition and solution tools supporting a creative mindset, it's as much about people as it is about things.
- TRIZ (теория решения изобретательских задач, teoriya resheniya izobretatelskikh zadach), was developed by the Soviet inventor Genrich Altshuller in 1946. He looked at thousands of innovations to create a theory based on **generalised patterns**.
- TRIZ means "the theory of inventive problem solving".

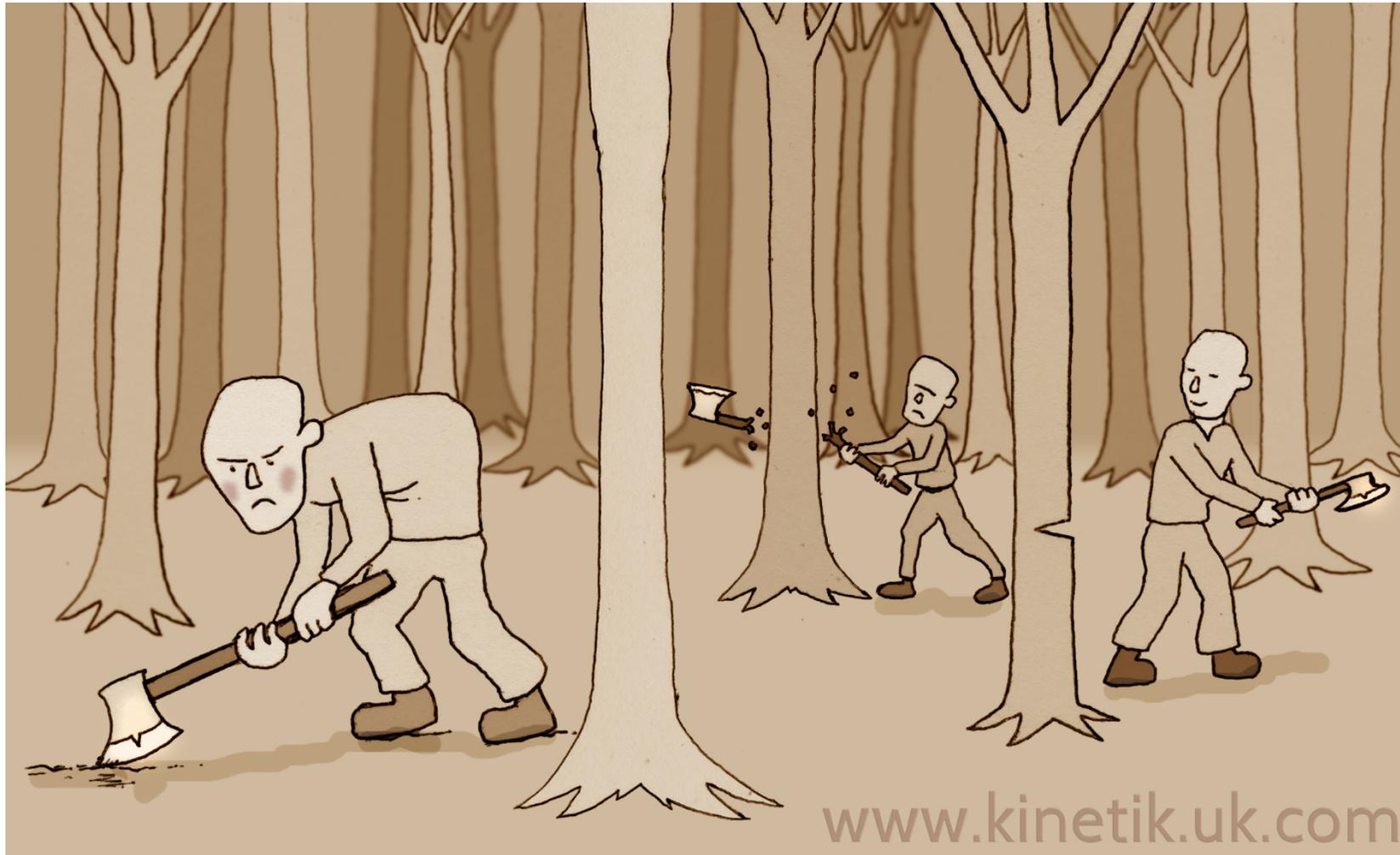


There are 4 main concepts around TRIZ

- There are 'ideal' solutions
- Opportunities/Issues are created due to some sort of a contradiction
- One path of innovation is to move from a specific problem to general problem and solution and back to specific problem
- There are some generalised principles we can use



How do you design the perfect axe?





How do you design the perfect axe?

- For heavy trees people would like a heavy axe (to give power) and a light axe (for ease of lifting).
- Contradiction: light axe = heavy axe



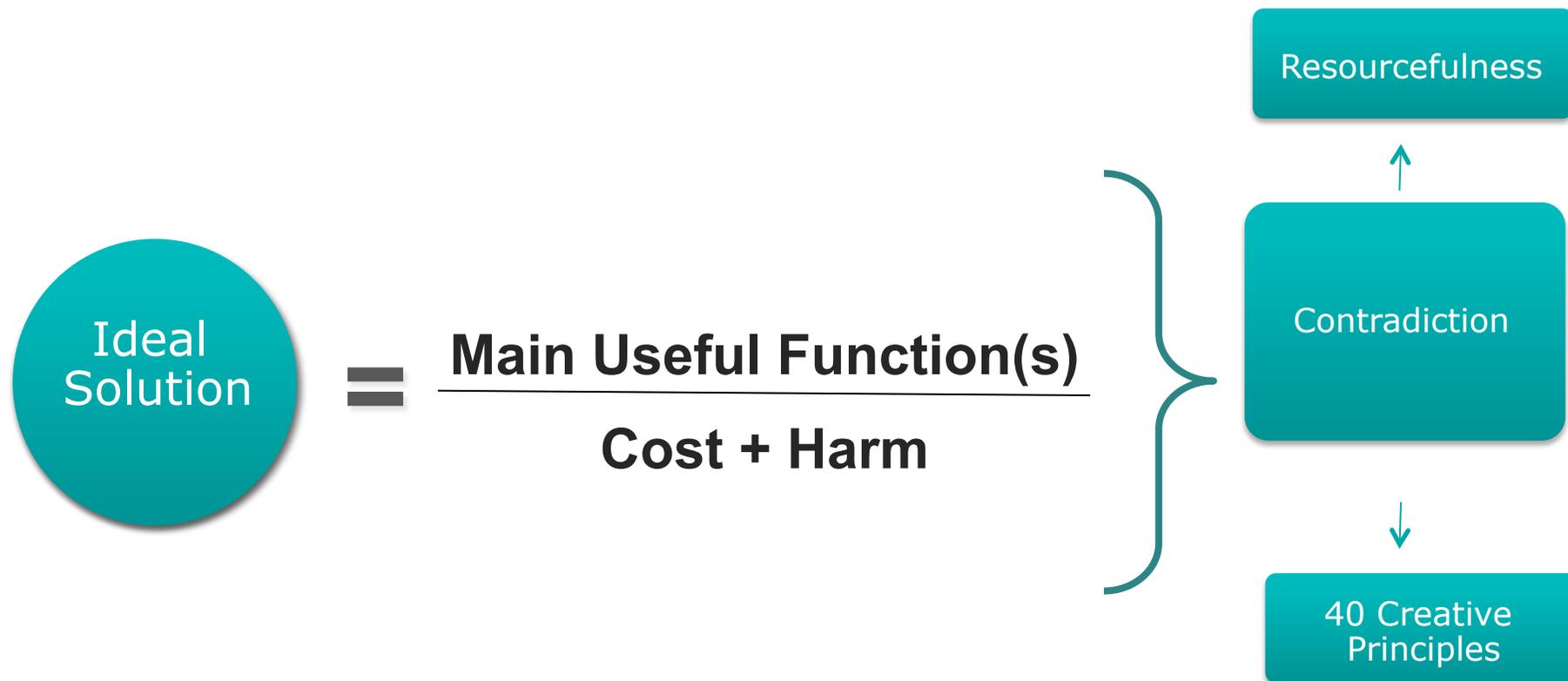


We need a disciplined way for innovation

- **A way to help us see things differently**
- **Something to stop us jumping to conclusions**
- **Something better than just good brainstorming**



THE TRIZ formula





There are 40 principles of TRIZ to help you resolve contradictions

Altshuller's 40 Principles of TRIZ

1. Segmentation	15. Dynamics	28. Mechanics substitution
2. Taking out	16. Partial or excessive actions	29. Pneumatics and hydraulics
3. Local Quality	17. Another dimension	30. Flexible shells and thin films
4. Asymmetry	18. Mechanical vibration	31. Porous materials
5. Merging	19. Periodic action	32. Color changes
6. Universality	20. Continuity of useful action	33. Homogeneity
7. "Nested doll"	21. Skipping	34. Discarding and recovering
8. Anti-weight	22. "Blessing in disguise"	35. Parameter changes
9. Preliminary anti-action	23. Feedback	36. Phase transitions
10. Preliminary action	24. 'Intermediary'	37. Thermal expansion
11. Beforehand cushioning	25. Self-service	38. Strong oxidants
12. Equipotentiality	26. Copying	39. Inert atmosphere
13. The other way around	27. Cheap short-living	40. Composite material films
14. Spheroidality		



We have created a card game that uses these principles specifically for the service industry

- Service delivery issues can be very different to product design
- The 40 principles are adapted to apply specifically to service industries





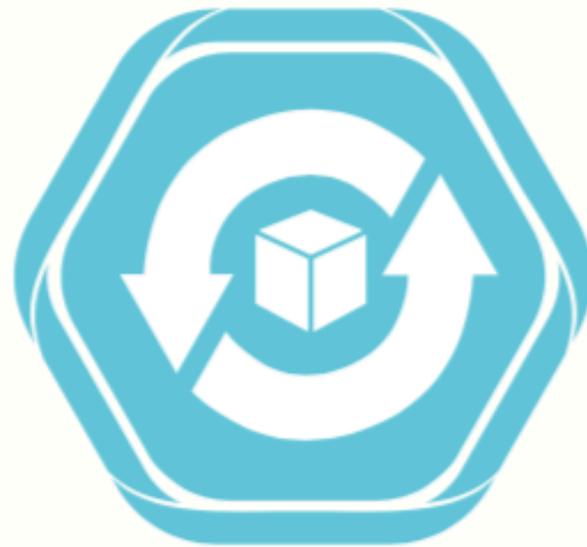
direct service

Delivering to the customer's location.



self-service

Customers assume the role of producer.



around service

Manipulating tangible elements
associated with the service.



bundled service

Combining multiple services into
a package.



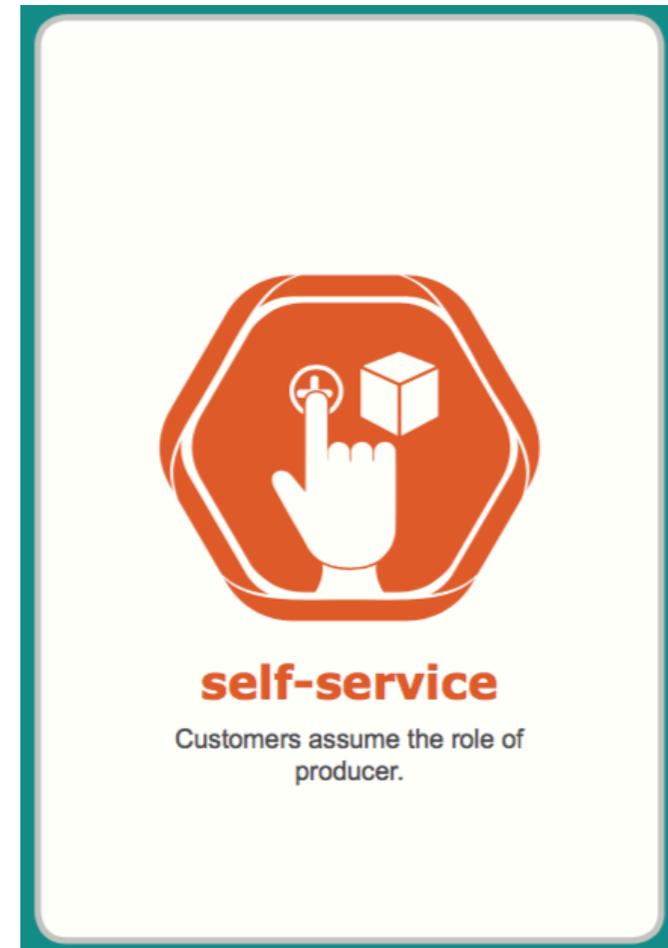
pre-service

Streamlining the activation of a
service.



Let's look at one example before the workshop

- You are an Operations Manager at a busy GP surgery
- You want your process to have an element of self service before patients have a doctor consultation



SPACE OR HOLES



Create space/environment in service operations to allow other tasks or functions to be performed.

SPACE OR HOLES



Can you make space in service operations to allow other tasks or services to be performed?

While waiting to see a doctor in a clinic, patients can see advertisements on screen about new health products.



Can you make space in a service to facilitate service consumption?

Open kitchens at restaurants make customers feel part of the process and provide assurance about food quality.



S



D



P



B



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The workshop process we will follow

You will all be given *one* KEY card and some INNOVATION cards

- 1) We will have 5 groups.
- 2) Introduce yourself. Each person is to identify a service challenge and write on a post it note. Identify the **one** you would like to work on by a group vote or other means.
- 3) Each group studies their statements on their KEY card in relation to their service issue. Write down any emerging thoughts from this.
- 4) Each group then chooses one INNOVATION card, with the same symbol as their KEY card to see whether that kind of service approach could yield ideas for direction of solutions.
- 5) If the INNOVATION card does not generate any ideas, pick a different INNOVATION card, but one that matches the KEY card symbol.
- 6) Write down the new ideas or thoughts that it generates and select the top one.**
- 7) Plenary: Feedback from each group on their chosen service issue and ideas generated**



Contact Kinetik if you want to know more about these TRIZ cards



www.kinetik.uk.com/products



bebetter@kinetik.uk.com



020 3397 0686





Thank you for coming!

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21st century enlightenment

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To put comments and suggestions to the Network, email Neil Reeder at **neil@headheartecon.co.uk**