

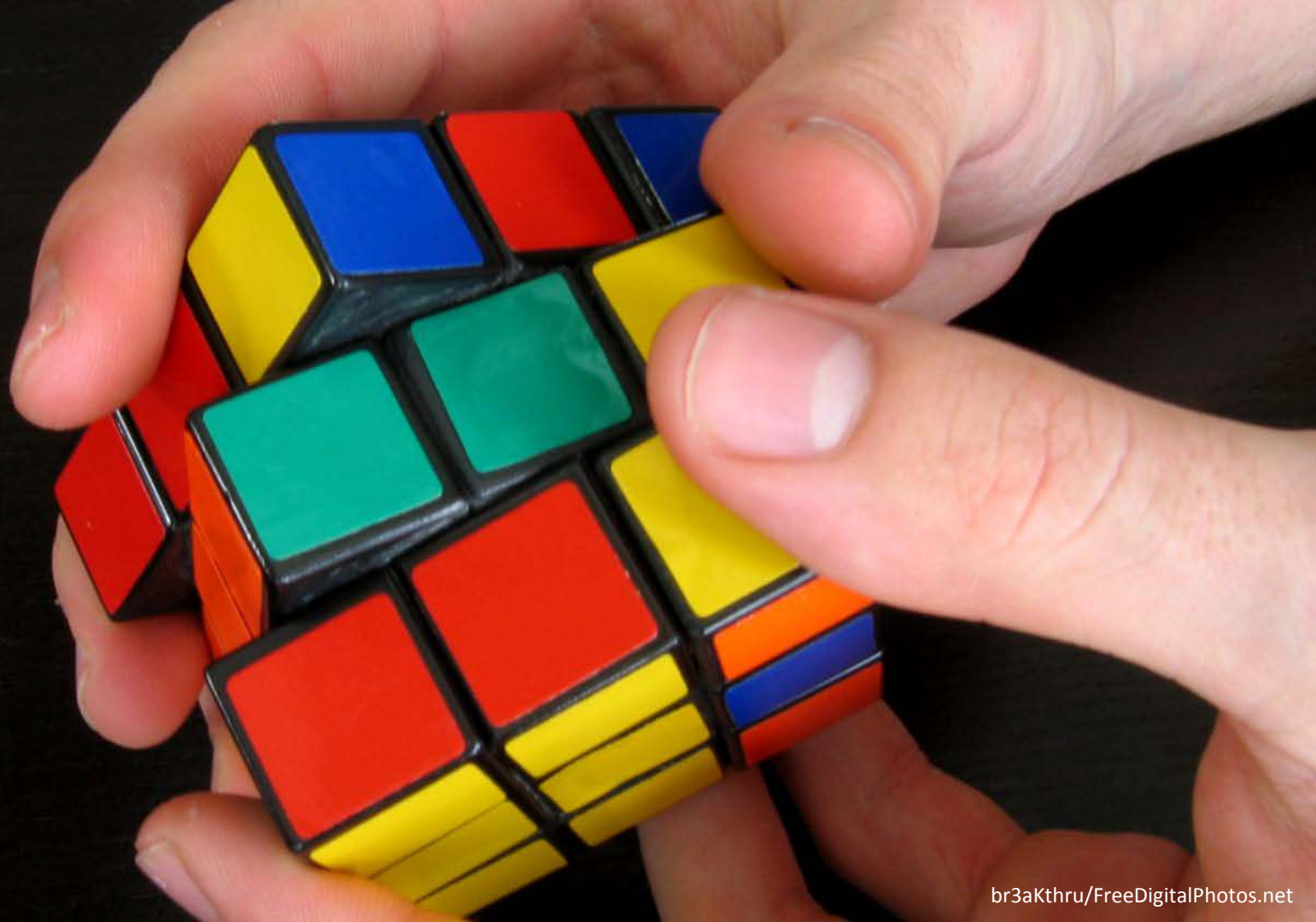
DESIGN + INDUSTRY

# Designing Award Winning Medical Products

**Presenter:** Anthony Honeyfield  
Design Director

AusBiotech National Conference  
2010

Difficult  
Problems



# Over 100 industry awards



AUSTRALIAN INTERNATIONAL  
DESIGN AWARD



AUSTRALIAN INTERNATIONAL  
DESIGN MARK



AUSTRALIAN  
DESIGN AWARD



AUSTRALIAN  
DESIGN MARK



NSW ENGINEERING  
EXCELLENCE AWARDS



NATIONAL ENGINEERING  
EXCELLENCE AWARDS



IDSA GOLD IDEA AWARD



IDSA SILVER IDEA AWARD



INTERNATIONAL FORUM  
DESIGN AWARD



PLASTIC INNOVATION  
AWARD



POWERHOUSE MUSEUM  
SELECTIONS



MIAMI BOAT SHOW  
INNOVATION AWARD



ID MAGAZINE  
DESIGN DISTINCTIONS



CHICAGO ATHENAEUM  
GOOD DESIGN AWARDS



CATIA AWARD FOR  
DESIGN AND  
ENGINEERING EXCELLENCE



FIAA AUSTRALIAN  
FURNITURE OF THE  
YEAR AWARD



MEDICAL DESIGN  
EXCELLENCE AWARD



THE PREMIER'S NSW  
EXPORT AWARD



CFIA AWARD FOR  
EXCELLENCE IN DESIGN &  
MANUFACTURE



EDN  
INNOVATION AWARD



DAME  
DESIGN AWARD



ENDEAVOUR AWARD



SESAMES AWARD



AQUATECH INNOVATION  
AWARD



NEW ZEALAND BEST  
AWARD

Over 95% of our products are commercialised





“D+I’s Knowledge of all aspects of product development has resulted in an enormous amount of value being added to the final result”

Stewart Bartlett, COO,  
Signostics



“D+I was selected for the project due to their ability to create world class design that we felt would be appropriate for the global market”

Paul Chapman, President,  
Chattanooga Group



“D+I has always continued to perform under tight development constraints, meeting the demands for high volume, low cost production in critical project lead-times”

Gareth Owen, Managing Director,  
Ingenico

When the conditions are right,

**DIVERSITY**

trumps ability

Scott E. Page

**THE  
DIFFERENCE**

HOW THE POWER OF DIVERSITY  
CREATES BETTER GROUPS, FIRMS,  
SCHOOLS, AND SOCIETIES

Social Diversity  
VS  
Functional Diversity



# 3 types of Functional Diversity

1. Perspectives
2. Heuristics
3. Interpretations

# 1. Perspectives

“Everyone else would climb a peak by looking for a path somewhere on the mountain. Nash would climb another mountain altogether and from that distant peak would shine a searchlight back on the first peak.”

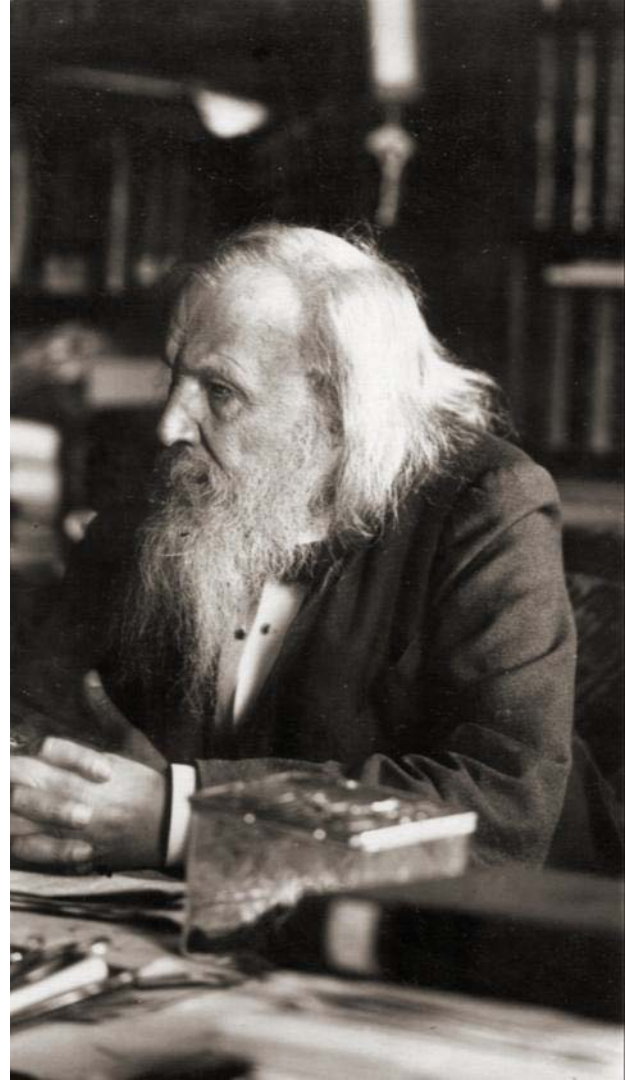
Donald Newman  
The Essential John Nash

hydrogen 1 <b>H</b> 1.0079																	helium 2 <b>He</b> 4.0026						
lithium 3 <b>Li</b> 6.941	beryllium 4 <b>Be</b> 9.0122																	boron 5 <b>B</b> 10.811	carbon 6 <b>C</b> 12.011	nitrogen 7 <b>N</b> 14.007	oxygen 8 <b>O</b> 15.999	fluorine 9 <b>F</b> 18.998	neon 10 <b>Ne</b> 20.180
sodium 11 <b>Na</b> 22.990	magnesium 12 <b>Mg</b> 24.305																	aluminum 13 <b>Al</b> 26.982	silicon 14 <b>Si</b> 28.086	phosphorus 15 <b>P</b> 30.974	sulfur 16 <b>S</b> 32.065	chlorine 17 <b>Cl</b> 35.453	argon 18 <b>Ar</b> 39.948
potassium 19 <b>K</b> 39.098	calcium 20 <b>Ca</b> 40.078	scandium 21 <b>Sc</b> 44.956	titanium 22 <b>Ti</b> 47.867	vanadium 23 <b>V</b> 50.942	chromium 24 <b>Cr</b> 51.996	manganese 25 <b>Mn</b> 54.938	iron 26 <b>Fe</b> 55.845	cobalt 27 <b>Co</b> 58.933	nickel 28 <b>Ni</b> 58.693	copper 29 <b>Cu</b> 63.546	zinc 30 <b>Zn</b> 65.39	gallium 31 <b>Ga</b> 69.723	germanium 32 <b>Ge</b> 72.61	arsenic 33 <b>As</b> 74.922	selenium 34 <b>Se</b> 78.96	bromine 35 <b>Br</b> 79.904	krypton 36 <b>Kr</b> 83.80						
rubidium 37 <b>Rb</b> 85.468	strontium 38 <b>Sr</b> 87.62	yttrium 39 <b>Y</b> 88.906	zirconium 40 <b>Zr</b> 91.224	niobium 41 <b>Nb</b> 92.906	niobium 42 <b>Mo</b> 95.94	technetium 43 <b>Tc</b> [98]	ruthenium 44 <b>Ru</b> 101.07	rhodium 45 <b>Rh</b> 102.91	palladium 46 <b>Pd</b> 106.42	silver 47 <b>Ag</b> 107.87	cadmium 48 <b>Cd</b> 112.41	indium 49 <b>In</b> 114.82	tin 50 <b>Sn</b> 118.71	antimony 51 <b>Sb</b> 121.76	tellurium 52 <b>Te</b> 127.60	iodine 53 <b>I</b> 126.90	xenon 54 <b>Xe</b> 131.29						
cesium 55 <b>Cs</b> 132.91	barium 56 <b>Ba</b> 137.33	lanthanum 57 <b>La</b> 174.97	hafnium 72 <b>Hf</b> 178.49	tantalum 73 <b>Ta</b> 180.95	tungsten 74 <b>W</b> 183.84	rhenium 75 <b>Re</b> 186.21	osmium 76 <b>Os</b> 190.23	iridium 77 <b>Ir</b> 192.22	platinum 78 <b>Pt</b> 195.08	gold 79 <b>Au</b> 196.97	mercury 80 <b>Hg</b> 200.59	thallium 81 <b>Tl</b> 204.38	lead 82 <b>Pb</b> 207.2	bismuth 83 <b>Bi</b> 208.98	polonium 84 <b>Po</b> [209]	astatine 85 <b>At</b> [210]	radon 86 <b>Rn</b> [222]						
francium 87 <b>Fr</b> [223]	radium 88 <b>Ra</b> [226]	actinium 89 <b>Ac</b> [227]	thorium 90 <b>Th</b> 232.04	protactinium 91 <b>Pa</b> 231.04	uranium 92 <b>U</b> 238.03	neptunium 93 <b>Np</b> [237]	plutonium 94 <b>Pu</b> [244]	americium 95 <b>Am</b> [243]	curium 96 <b>Cm</b> [247]	berkelium 97 <b>Bk</b> [247]	californium 98 <b>Cf</b> [251]	einsteinium 99 <b>Es</b> [252]	fermium 100 <b>Fm</b> [257]	mendelevium 101 <b>Md</b> [258]	nobelium 102 <b>No</b> [259]								

\* Lanthanide series

lanthanum 57 <b>La</b> 138.91	cerium 58 <b>Ce</b> 140.12	praseodymium 59 <b>Pr</b> 140.91	neodymium 60 <b>Nd</b> 144.24	promethium 61 <b>Pm</b> [145]	samarium 62 <b>Sm</b> 150.36	europium 63 <b>Eu</b> 151.96	gadolinium 64 <b>Gd</b> 157.25	terbium 65 <b>Tb</b> 158.93	dysprosium 66 <b>Dy</b> 162.50	holmium 67 <b>Ho</b> 164.93	erbium 68 <b>Er</b> 167.26	thulium 69 <b>Tm</b> 168.93	ytterbium 70 <b>Yb</b> 173.04
actinium 89 <b>Ac</b> [227]	thorium 90 <b>Th</b> 232.04	protactinium 91 <b>Pa</b> 231.04	uranium 92 <b>U</b> 238.03	neptunium 93 <b>Np</b> [237]	plutonium 94 <b>Pu</b> [244]	americium 95 <b>Am</b> [243]	curium 96 <b>Cm</b> [247]	berkelium 97 <b>Bk</b> [247]	californium 98 <b>Cf</b> [251]	einsteinium 99 <b>Es</b> [252]	fermium 100 <b>Fm</b> [257]	mendelevium 101 <b>Md</b> [258]	nobelium 102 <b>No</b> [259]

\*\* Actinide series





Simcro  
**OPTILINE Sheep Drencher**  
2009



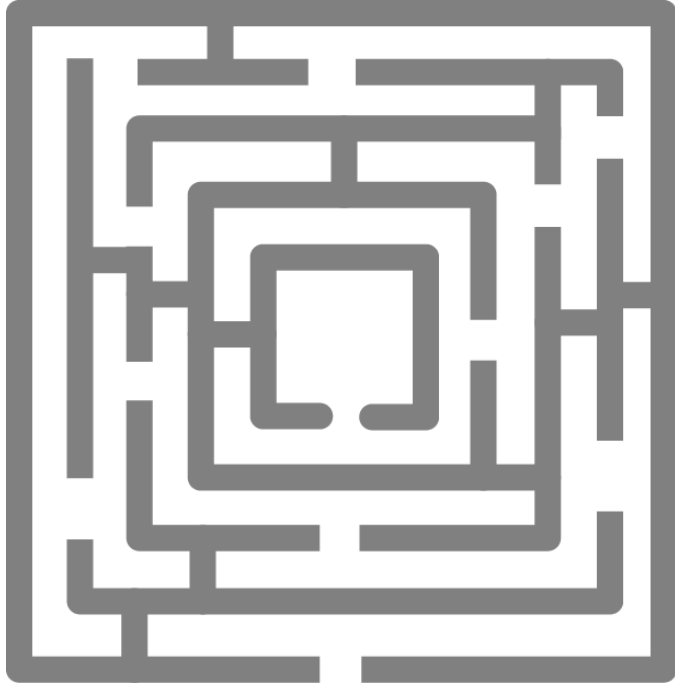
Telemedcare  
**Clinical Monitoring Unit for Self - Management**  
2009



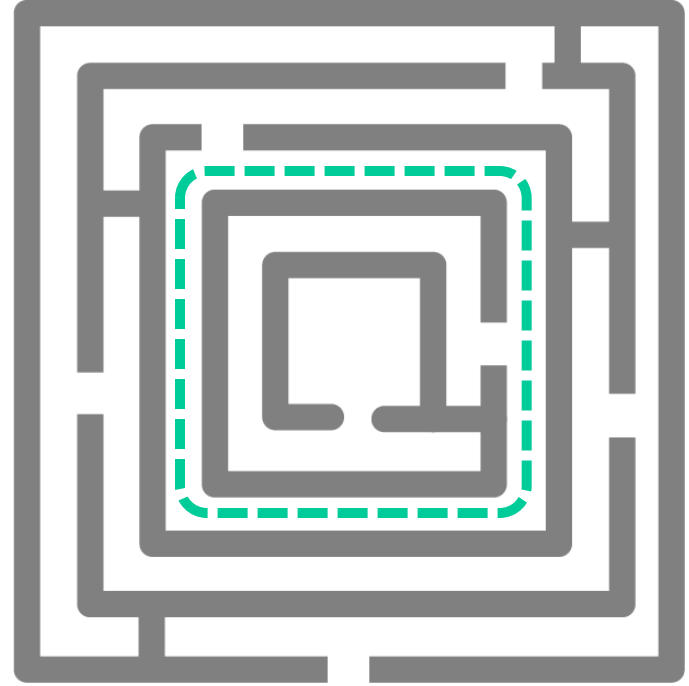


## 2. Heuristics





BRANCH



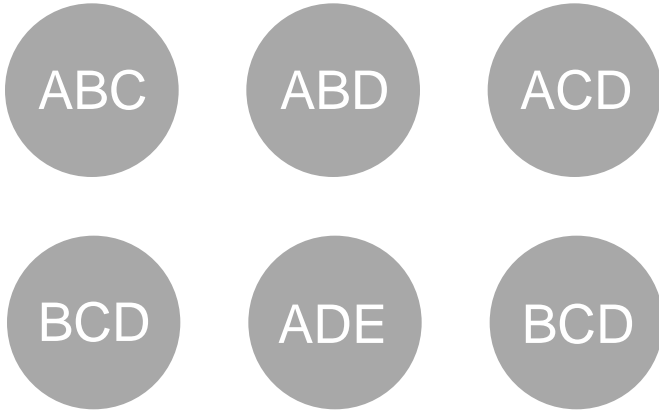
ISLAND



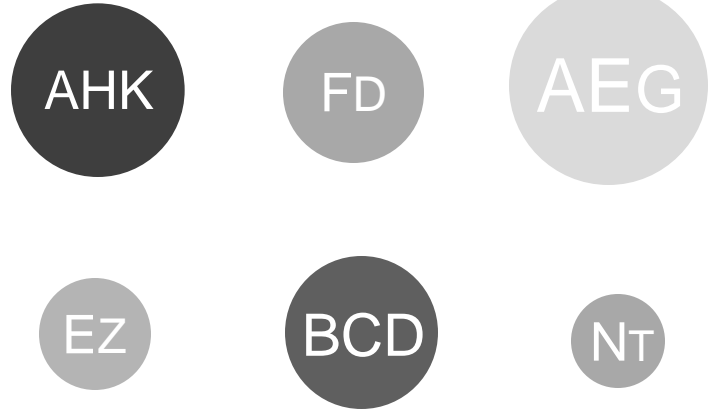
Make it Modular

Amtote  
Reader Printer Module  
2007

# THE TOOLBOX VIEW



Alpha Group



Diverse Group

# 3. Interpretations

(Meaningful categories)

Nerds

Battlers

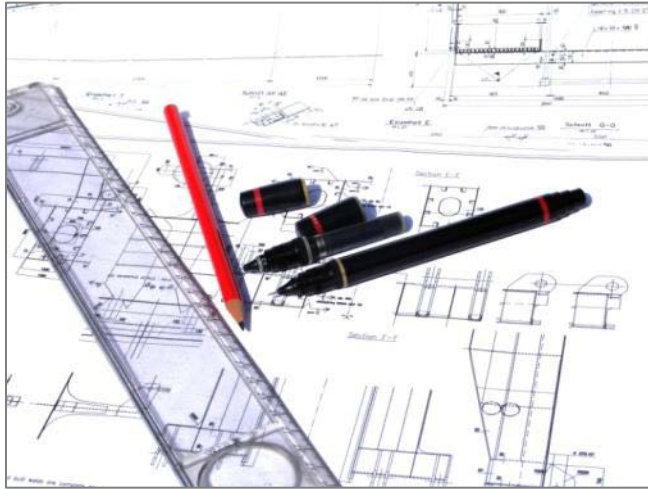
Working families

Aspirationals

Yuppies

Hippies





## ENGINEERS

Needs grouped  
according to how  
product is  
**DEVELOPED**



## CUSTOMERS

Needs grouped  
according to how  
product is  
**USED**



Chattanooga Product Range



Signostics  
Personal Ultrasound device  
2009

# For diverse team to beat the experts:

1. The problem must be hard
2. The people must be smart
3. The group must be reasonably large



WIDE RANGE OF INTERESTS AND EXPERIENCE

DEPTH OF EXPERTISE

DESIGN + INDUSTRY

Thankyou

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