

## Fusion: How World-Class Innovators Create the Unexpected

In science, the fusion of two nuclei into a new, combined nucleus releases a massive amount of energy (nuclear fusion). Likewise, a Fusion in business, technology, and the arts can release a massive amount of value and create whole new companies, industries, & human capabilities. But how?

### Let's Find Out

*Fusion* is a global research study of 30 “Fusioneers” and about 70 of their friends and colleagues. They include a nun, billionaire entrepreneur, scientists, artists, chef, corporate executives, and more. Each one has created something from “odd” combinations that either have brought or should bring significant value to the world. They span art/humanities, science/tech, and business/organizations. In-depth interviews are being conducted, as well as “shadowing” selected participants, gathering publicly-available data, and administering the well-grounded Multicultural Personality Assessment to uncover or suggest patterns in open-mindedness, flexibility, stability, empathy, and initiative.

The research itself is a fusion of business and psychology literatures that draws on innovation, creativity, awareness, mindfulness, empathy, and integrative thinking. The remarkable Fusions & Fusioneers studied include:

	What	Why	Who	Where
1	Schools & Homes for the Schoolless & Homeless	450,000 Lives Changed	Sister Cyril Mooney	Ireland, India
2	Nokia: Ringtones Invented & Hi-Tech for the Poor	1 <sup>st</sup> Contract Between the Music & Mobile-Phone Industries & LifeTools: 125 million subscribers	Jawahar Kanjilal	India
3	Hotmail (The 1 <sup>st</sup> Free Email)	Free BizModel Overtakes Incumbents	Sabeer Bhatia	Silicon Valley
4	Fast Food in Laid-Back-Land (KFC, Hungry Jack's, Domino's Pizza)	\$1Bn+ business built	Jack Cowin	Canada, Australia
5	Olympic Dive Mathematics	The Best Score in Olympic History	Dr. Kenneth Graham	Australia
6	The Science of Happiness	Harvard's Most Popular Course Ever & Tech-Enabled HappiLearning	Dr. Tal Ben Shahar	Israel, US
7	Autism Ear Test	Age 0-4 Intervention for 70 Million People (While Our Brains Are Developing)	Raffi Rembrandt	Israel, US
8	Well-Being & Wealth-Building	Over USD 15Bn Under Management (Australia's Largest Independent Financial Advisory Firm)	Arun Abey	Sri-Lankan-Indian-Australian
9	Multi-E Emmy Omnimedia	Lime.com – Early Omnimedia	Ted Saad	Israeli-

	What	Why	Who	Where
				Palestinian, US
10	Quantum-Chemistry Social Networks	One of the 100 Most Innovative Firms in the World ( <i>CIO Magazine</i> )	Dr. Karen Stevenson	US, Spain, Earth
11	MenuLog.com & Nike Camps Global/SCA	USD 855 Million company built & Sportscamps: from 80,000 Kids to 800,000	George Kolovos	Greek-Australian
12	Silk Vaccine, Please, No Ice...and a Coke	Millions of Lives Saved (Since These Vaccines Need No Refrigeration)	Livio Valenti & Dr. Filo Omenetto	Italy, China, Cambodia, US
13	The Human Face of Big Data	National Geographic Photographer Helps Us See Humanity in Big Data	Rick Smolan	US, Earth
14	Urban Farming	\$70Bn Market, Lives & Nutrition Improved	Dr. Margaret Connors	Irish-US
15	Mr. Toilet & The BoP Hub	Toilets for 2.6Bn people & Businesses for 4Bn people	Jack Sim	Chinese Singaporean
16	Set My Scientists Free!	DNA Analysis on the Mobile Phone	Dr. Samuel Gan	Chinese Singaporean
17	Cancer-Med Implants & The Pocket Watch	Drip-Dose Chemotherapy@Cancer	Dr. Chin Sau Yin	Chinese Singaporean
18	Rural Hi-Tech & Integrative Thinking (by a Concert-Trained Pianist)	Redline.com (Mission-Critical Military & Other Ops) & Harvard-Rotman Research	Dr. Mihnea Moldoveanu	Romania, US, Canada
19	Executives on Trapeze	Mind-Body Integration, Resilience, & Leadership Development	Dr. Edy Greenblatt	US, Israel, Canada
20	Digital Marketing & BioFuel	Early Digital Marketing & Austria's Largest BioFuel Factory	Asil Toksal	Turkish-Austrian, US, Singapore
21	International JV Grower	Combining New & 150-yr-old Co's (3,800 New Employees Introduce Field Marketing to Asia)	Sean Leas	Africa, SEAsia
22	Oilpipe Mammography	Breast Cancer Detection with an Over-Clothing Electric-Current Cup	Krish Krishnan	India, Malaysia, Singapore
23	Connectography	Geography of the Future	Dr. Parag Khanna	Indian-Earthling
24	Ethno-Botany-Pharma Cosmetics	New & Natural Products for Health	Dr. Bala	India, Singapore
25	Mosquito Attractant & Other 180° Inventions	Simple, Everyday Inventions & Developing Inventive Minds	Robest Yong	Malaysia, Japan
26	Mystery Infections: 24 Tests in 1	9 Million Lives to Save Worldwide & \$2Bn in Medical Savings	Dr. Ravikumar Banda	India
27	Fusion Cooking	Globally-Renowned Deliciousness	Chef Ryan	Singapore
28	Pig FitBits	USD 8Bn in Agriculture to Save Worldwide	Matthew Rooda	Silicon Prairie (Iowa, USA)
29	Computational Structural Biology	Interdisciplinary Basic Research (Following in the Footsteps of Supervisor Michael Levitt, Nobel Prize Winner in Chemistry)	Adelene Sim	Chinese Singaporean
30	China-West – The Forbidden Music of The Cultural Revolution	Fusion Music Commissioned & Played by Yehudi Menuhin, Yo-Yo Ma, & Symphonies Worldwide	Dr. Chen Yi	China, US

Dr. Meadows, the researcher & author, has a DBA from Harvard Business School and has taught at Harvard, INSEAD, NUS, SMU, and AIM. She co-founded an innovation lab in Singapore 15 years ago and is currently directing i2i, the Innovation & Insights Center at a Forbes top-20 international business school (SP Jain School of Global Management). She is grateful for the help of the Fusioneers and their friends, as well as the research assistance of Dr. Lee Poh Chin and research travel orchestration from Shareff Uthuman.

A multimedia book & set of articles is in development, presenting a new model of lateral innovation ("Fusion") and the additional themes, threads, and lessons learned from these remarkable people. After downloading & opening the Aurasma app from the book's website, readers will be able to point a smartphone at a Fusioneer photo, and that person's TED talk or other video will play. Pointed to another graphic, the author may pop up with post-publication updates or a Fusion video series.

The book will also include an app for self-assessment, peer benchmarking, and planning the reader's own self-enhancement journey to increase mental diversity and creative capability. Implications will be offered for fostering Fusion in employees, teams, and organizations. In-person workshops will also be available for learning/growth and networking. We'll be inviting participants to share their data and stories for future study and inspiration.

### **Application to Business Today**

In a world of industry convergence and disruption, CEO's need to know how to cross-fertilize ideas across businesses and industries and leverage the lateral innovators in (and beyond) their midst, to both create and respond to disruption. Managers need to know how to manage teams to create breakthrough advances, and systems are needed for fostering Fusion organization-wide.

Lateral innovation is a key leadership skill for survival and growth.

Fusion will be especially relevant to corporations and individuals trying to envision and create the disruptive future. It would seem unimportant for highly-regulated industries. However, disruption may still come their way. Case in point: Nokia Life Tools. The leadership team wanted to offer an innovation – micro-insurance – to their health-information subscribers. After they had put together the service bundle they wanted to offer, they presented it to the telecommunications regulators in India, who promptly said no – insurance products are not to be sold by a telecommunications provider. So they offered the micro-insurance for free as part of the fee-based information service bundle – a disruptive innovation in a highly-regulated industry that actually fused two industries.

Beyond the threat and opportunity of disruption, integration in and of itself can unlock enormous value -- even in the face of technological superiority. Microsoft Office dominated its space not because it was better software. Word was not particularly better than WordPerfect, nor was PowerPoint acclaimed as an advance over Harvard Graphics, or Excel over Lotus 123. Office put the others out of business specifically because it was a fusion of good-enough software that did what people wanted – seamless integration of words, numbers, and pictures in a document. Apple integrated design features (e.g. graphical

interface, computing, & calligraphy) in a new way, and the integration of mobile phones with cameras, GPS, and other technologies are unlocking whole new ways of creating value we are only beginning to explore.

Further, although we talk about board and management team diversity, how many executives consider their own mental diversity? In a VUCA world, you need to have a diverse management team in place because once a crisis hits, you won't have time to gather a new team to respond. Likewise, for the organization and for career development, a leader needs a diverse mindset and toolkit – and the mental flexibility to use it.

### **Preview of the Upcoming Book...**

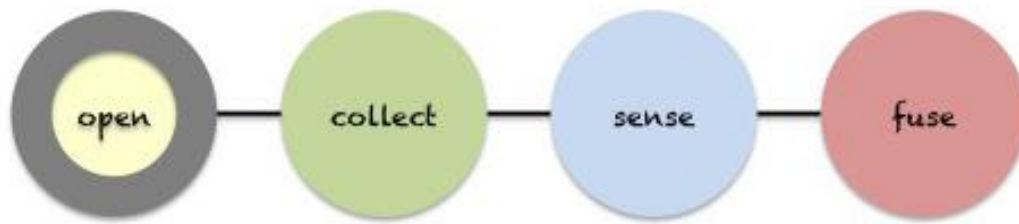
How did the ringtone's inventor come up with the idea and create the world's first contract between the music and mobile phone industries? How did he then bring high-tech to the poor of India, with Nokia's Life Tools (125 million subscribers)? How did an artist and quantum chemist start mathematically modelling social systems and create a company that *CIO Magazine* called "one of the 100 most innovative firms in the world"? Fast food in a notoriously "laid-back" country, wealth-building through wellbeing, and free Hotmail were all counterintuitive at the time but created well over a billion dollars in business value.

We are in the early days of a renaissance of innovation, fuelled by IT, communications, and globalization. As we've seen in past eras of creative productivity, fertile ground for high-value innovation lies in the spaces between domains of industry, country, field, function, social class, and more.

To create ground-breaking advances, we need to know how to combine ideas that don't normally go together in unique ways that create substantial value. For example, injecting silk fibres into vaccines can bring polio prevention to millions in the developing world – without the cost and instability of cold-storage distribution. A new cancer-treatment device has the potential to treat millions of people, using a design from the pocket watch (1893). A nun from Calcutta began her creative journey running a school with 800 students, then fused social programs and education, Indian castes, healthy and handicapped, and improved the lives of 450,000 people.

This book draws on research with 30 world-class innovators ("Fusioneers") to share how they innovate, in the hope that the rest of us might do more of the same. These are people who have created billion-dollar enterprises, scientific advances, new fields, artistic achievements, and more. They have lessons to teach us as leaders and innovators, as well as offering new perspectives on team processes, company systems, and industry/corporate leadership.

A new model of cross-domain innovation is presented which includes 4 key elements:



- open
  - outward - Fusioneers are described by their colleagues as unusually open (and outreaching) to new ideas, people, experiences, and more -- everything around them. They are highly aware, great listeners, and great noticers
  - inward - they cultivate a core of values and an openness to inspiration, through prayer & meditation, mindful exercise (like walking or swimming), power-washing the pig house, etc.
- collect – they collect tools for the creative workshop of the mind -- ideas, people, experiences, skills, college degrees, and more, out of curiosity, not seeking immediate applicability. One Fusioneer was getting a PhD, masters, and bachelors at the same time, in different fields, out of sheer curiosity
- sense – being open, and having created a unique lens on the world through which ideas and opportunities flow, Fusioneers often use one, two, or all three dimensions of empathy: heart (feeling what others feel), head (understanding issues and stakeholders from others’ perspectives), and hands (taking action through compassion, or solving their own problem and then bringing the solution to the world)
- fuse – they don’t just make choices between alternatives (an industrial-age MBA approach) but instead integrate -- taking disparate models, technologies, people, and organizations and putting them together in new, value-creating ways

Additional findings include:

- Fusioneers are remarkably **global**. This study was not intended to be global, but it became intensely so. It was hard to schedule research trips, for example, with one Fusioneer who lives in Dallas and Spain but met me in New York on her way between working in Copenhagen and Frankfurt; another who lives in Los Angeles and Tel Aviv but works in Toronto; and another of Turkish heritage who grew up in Austria and lives in New York and Singapore. Could it be that crossing one boundary leads to more?
- They **disregard or don’t see boundaries of discipline**, field, social class, industry, etc. One Fusioneer, who studied art and quantum chemistry in college, saw a quantum-chemistry pattern when looking down on her lab workers and drew on ethnography, social science, mathematics, and software development to map the social system. Her advisor told her to focus. She didn’t understand and said she was focused like a laser beam on the one thing she was studying. She just took multiple perspectives and borrowed a diverse set of tools to address it.
- They understand deeply & **see patterns**, like the one who saw lines of dried grass in the park and discovered there was an old fort buried underneath. Or the dance ethnographer who knows thousands of dance patterns and had no trouble seeing

patterns in work energy that led to the resilience movement

- They are **humble**. Time & again I listened to participants protest, “But I’m not creative – I don’t think I fit into your study,” or “I’m just a guy who got lucky – it wasn’t a big deal.” (The former quote is from an entrepreneur who created \$1billion of business. The latter is from the founder of a \$400million corporation.)

What could this mean to a CEO or executive? Self-assessment questions and options to enhance mental diversity and creativity are offered, based on the Fusioneers’ creative journeys, taking into account the most powerful insight from the study: **each Fusioneer is uniquely and extremely himself. Developing your creative self will require enhancing your own unique design**, and the model and common themes will provide guideposts for reflection and action. Additional questions & suggestions will be presented for managing creative people, teams, and organizations.

Become uniquely and extremely yourself. Open, collect, sense, fuse, and bring your creations to the world to make it better.