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INTRODUCTION - NEW PATHS TO INNOVATION

Innovation is about seeing the world not as it is, but as it could be. It is about exploring really "wicked problems" whose solutions cannot be found in past experience or proven by (historical) data. Contrast this with most companies' obsessive reliance on efficiency and predictability and it is no wonder breakthrough innovations are so rare.

But innovation and efficiency do not have to be at odds. Design thinking balances the exploration of new knowledge (innovation) with the exploitation of current knowledge (efficiency) to regularly generate breakthroughs and create value for companies. Design thinking focuses on accelerating the pace at which knowledge advances through the knowledge funnel from mystery (an unexplainable problem) to heuristic (a rule of thumb that guides us toward a solution) to algorithm (a replicable success formula).

As knowledge moves through this knowledge funnel productivity grows and costs drop. These efficiencies are used to constantly tackle new mysteries and explore potential breakthroughs. Organisations that do this gain unbeatable competitive advantage. By wondering what could be and making it happen, combining proof-based analytical thinking with possibility-based abductive thinking; realigning financial planning and reward systems to encourage bold ideas, changing organisational structures and processes to advance knowledge, defending design thinking to stakeholders, and developing key tools of design thinkers.

TYPES OF THINKING AND REASONING

Analytical thinking

This is the world of exploitation (maximisation of payoff from existing knowledge) and administration of business through analysis, reasoning, proof via historical data and mastery. Judgment, bias and variation are the enemies. Organisations dominated by analytical thinking are built to maintain the status quo: they can build size and scale. Their focus is short-term on refining algorithms: certified production processes that guarantee a particular result. Their progress is accomplished by measured, careful, incremental steps.

Declarative logic

This is a combination of two forms of scientific, analytical logic:

1. deductive logic, which reasons from the general to the specific; if the general rule is that all crows are black, and I see a brown bird, I can declare deductively that this bird is not a crow;

2. inductive logic, which reasons from the specific to the general; if I study sales per m2 across 1,000 stores and find a pattern that suggests stores in small towns generate significantly higher sales per m2 than stores in cities, I can inductively declare that small towns are my more valuable market.

Intuitive thinking

This is the world of exploration (search for new knowledge) and invention of business through intuition (knowing without reasoning), creativity, originality and inability to prove a new concept in advance. Analysis is its enemy. Organisations dominated by intuitive thinking are built to generate innovation fast and furiously: they cannot and will not systematise what they do. Their focus is long-term on solving mysteries. Their progress is uneven, scattered and characterised by false starts.

RELIABILITY DOMINANCE

The vast majority of businesses follow a common path. The company is birthed through a creative act that converts a mystery to a heuristic through intuitive thinking. It then hones and refines that heuristic through increasingly pervasive analytical thinking and enters a long phase in which the administration of business dominates (demanded by bankers, boards and shareholders). It often disregards the fact that there are multiple paths out of any mystery.

What organisations dedicated to running reliable algorithms with consistent and predictable outcomes often fail to realise is that while they reduce the risk of small variations in their business, they increase the risk of cataclysmic events that occur when the future no longer resembles the past and the algorithm is no longer relevant or useful. A business that is overweighted toward reliability will erect organisational structures, processes and norms that drive out the pursuit of valid answers to new questions.

This pronounced tilt toward reliability is mainly caused by the fact that the modes of reasoning that produce reliable outcomes are familiar to business people from long exposure and experience. Most organisations demand an idea be proved before it is implemented, display an aversion to bias and are pressured for time.

Example - McDonald's Mystery: what and how did the mobile, leisured, mass middle class of Southern California in the 1950s want to eat? Heuristic: quick-service restaurant with strictly limited menu options. Algorithm: extreme simplification and standardisation of all processes, removing all judgment and variety. Alternative path out of mystery: replace burgers and fries with submarine sandwiches and fresh, healthful ingredients (Subway).

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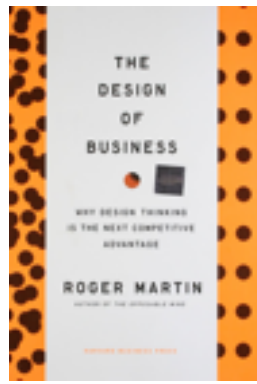
DESIGN THINKING

Design thinking organisations reconcile analytical and intuitive thinking. They stand apart in their willingness to continuously redesign their business. They do so with an eye to creating advances in both innovation and efficiency. Their focus is on advancing knowledge from one stage of the knowledge funnel to the next: from mystery to heuristic to algorithm. The reward is a massive gain in efficiency that is used (reinvested) for solving more mysteries (or reengaging with the original mystery).

Design thinking is a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.

Designers use abductive reasoning, as opposed to declarative logic, as no new idea can be proved deductively or inductively using historical data. New ideas come into being by way of logical leaps of the mind, arising when a thinker observes data that does not fit with existing models and tries to make sense of the observation by making an inference to the best explanation. The true first step of reasoning is not observation but wondering: abductive logic. This is the logic of what might be and is not based on proof.

A vibrant, growing company makes discoveries that help it get into new business or markets, or help it stay ahead of competitors. It continually reinvents itself.

TRANSFORMING THE ORGANISATION

To incorporate more intuitive thinking into an analytical culture, the organisation must open up new definitions of proof, embrace some degree of subjectivity as not just inevitable but valuable, and acknowledge that getting the right answer is worth taking a little more time. This can be achieved with the following measures:

1. Have designers sit inside the core business teams rather than have them segregated in a central staff function;
2. Build a network of design experts as a sounding board for the business teams, e.g. external design board;
3. Give business managers first-hand design thinking experience (e.g. develop deep user understanding, visualise and prototype new possibilities);
4. Free up time for managers to stare into the next mystery by refining the algorithm that enables handing over routine parts of managers' jobs to juniors;
5. Change the strategy process to include dialogue about possibilities rather than presentation of the one and only answer (strategy is a design exercise);
6. Change the budgeting processes for discovery activities to consist only of setting goals and spending limits in line with estimated value of the innovation;
7. Change the reward systems by allocating rewards to those who solve wicked problems;
8. Make the solving of wicked problems a high-status assignment;
9. Implement an ad hoc project organisation for true discovery activities with true (client) collaboration and clearly defined projects that come to an end at a specified date;
10. Connect with innovators outside the company and develop their creations (not all creations have to come from within);
11. Do not ask the sales force what they think of a design - their job is to sell it.

KEY TOOLS FOR DESIGN THINKERS

Observation
Since design thinkers are looking for new insights that will enable them to push knowledge forward, they must be able to see things that others do not. This requires careful watching and listening, before even asking a single question. Deep user-centred understanding is an essential tool of the design thinker.

Imagination
When faced with observed inconsistent data one must make an inference to an explanation, which requires imagination. It is a guess that constitutes the best explanation one can devise given the data. The breakthrough inference is brought to life and tested using prototypes, which are observed whether it operates as expected.

Configuration
The idea is then translated into an activity system that will produce the desired business outcome thereby bringing the abductively created insight to fruition.

Originality demands a willingness to experiment, spontaneity and being comfortable with the process of trial and error.