

Business Innovation Frameworks

Origins, References, and Academic Foundations

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Origins, References, and Academic Foundations

This handout provides key references and originating sources for the business innovation frameworks discussed in the AI-Driven Business Innovation masterclass. These references can be used to back up the frameworks' validity and provide further reading on their applications.

Data Value Pyramid

The Data Value Pyramid represents a widely recognised progression in analytics maturity, from basic descriptive analytics to advanced cognitive systems:

- **Descriptive Analytics:** What happened?
- **Diagnostic Analytics:** Why did it happen?
- **Predictive Analytics:** What will happen?
- **Prescriptive Analytics:** What should we do?
- **Cognitive Analytics:** Self-optimising systems

Key References

Gartner's Analytics Maturity Model

Gartner's research on analytics maturity provided the foundation for this widely-adopted framework. Their model outlines the progression of analytics capabilities from hindsight to insight to foresight.

Gartner Research, "Analytics and BI Maturity Model"

INFORMS Analytics Maturity Model

The Institute for Operations Research and the Management Sciences (INFORMS) developed a comprehensive model for analytics maturity that incorporates organisational readiness, data preparedness, and analytical capabilities.

INFORMS Analytics Maturity Model

Innovation Adoption Framework

The Innovation Adoption Framework describes how new technologies spread through organisations and markets, progressing through distinct phases of adoption and implementation.

Key References

Diffusion of Innovations

The seminal work on how innovations spread through populations, categorising adopters as Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. This foundational theory has been applied across countless domains and technologies.

Everett Rogers, "Diffusion of Innovations" (book, first published 1962, multiple later editions)

Crossing the Chasm

This influential work adapted Rogers' adoption lifecycle specifically for high-tech products, focusing on the critical "chasm" between Early Adopters and the Early Majority that many technologies fail to cross.

Geoffrey Moore, "Crossing the Chasm" (book)

Capability Maturity Model (CMM / CMMI)

The Capability Maturity Model provides a framework for assessing and improving organisational processes and capabilities through defined maturity levels.

Key References

Software Engineering Institute

The original Capability Maturity Model was developed at the Software Engineering Institute (SEI) at Carnegie Mellon University, initially for software development processes but later expanded to other domains.

Software Engineering Institute (SEI), Carnegie Mellon University

CMMI Institute

The CMMI Institute (now part of ISACA) administers the Capability Maturity Model Integration framework, which has become the standard for process improvement across multiple industries.

CMMI Institute (ISACA)

Business Model Canvas

The Business Model Canvas is a strategic management template for developing new or documenting existing business models, providing a visual chart with elements describing a firm's value proposition, infrastructure, customers, and finances.

Key References

Business Model Generation

This seminal work introduced the Business Model Canvas as a visual framework for describing, analysing, and designing business models. The canvas has become a standard tool in business strategy and entrepreneurship.

Alexander Osterwalder & Yves Pigneur, "Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers" (book, 2010)

Strategyzer

The official organisation founded by Osterwalder that provides resources and templates for the Business Model Canvas and related strategic tools.

Strategyzer (co-founded by Alexander Osterwalder)

Change Management Models

These models provide frameworks for managing organisational transformation and the human aspects of change implementation.

Key References

Lewin's 3-Stage Model

This foundational change management model describes change as a process of Unfreezing (preparing for change), Changing (implementing the change), and Refreezing (reinforcing new behaviors).

Kurt Lewin, psychologist and founder of social psychology

Kotter's 8-Step Process

This widely-cited model describes eight steps for implementing organisational change: create urgency, form a coalition, create vision, communicate vision, remove obstacles, create short-term wins, build on change, and anchor changes in corporate culture.

Minimum Viable Product (MVP)

The MVP approach focuses on creating the simplest version of a product that delivers value and enables learning, allowing for rapid iteration based on user feedback.

Key References

The Lean Startup

This influential book popularised the MVP concept as part of the Lean Startup methodology, emphasising validated learning through a build-measure-learn feedback loop.

Eric Ries, "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses" (book, 2011)

Data Strategy Framework

Data Strategy frameworks provide approaches for organisations to treat data as a strategic asset, covering governance, quality, architecture, and value creation.

Key References

DAMA-DMBOK

This comprehensive industry reference covers all aspects of data management, including strategy, governance, quality, architecture, security, and more.

DAMA International, "DAMA-DMBOK: Data Management Body of Knowledge" (guide, multiple editions)

Responsible Innovation Framework

The Responsible Innovation Framework provides principles for ensuring that technological innovation considers ethical implications, societal impacts, and long-term consequences.

Key References

Responsible Research and Innovation (RRI)

This framework emphasises transparent, interactive processes that engage various stakeholders to ensure the ethical acceptability, sustainability, and societal desirability of innovation.

René von Schomberg (formerly European Commission), various publications on Responsible Research and Innovation

Technology Democratisation Model

The Technology Democratisation Model addresses how advanced technologies can be made accessible across organisations of various sizes and resource levels.

Key References

The World Is Flat

While not specifically focused on technology democratisation, this influential book discusses the leveling of the global playing field through technological changes.

Thomas Friedman, "The World Is Flat" (book)

Gartner on Data Democratisation

Gartner's research on data democratisation provides insights into making data and analytics accessible to non-technical users across organisations.

Gartner Research, various reports on data democratisation

Three Horizons of Growth

This strategic framework categorises innovation initiatives into three horizons: H1 (extending and defending core business), H2 (building emerging opportunities), and H3 (creating viable options for future business).

Key References

The Alchemy of Growth

This book by McKinsey consultants details the Three Horizons framework, providing practical guidance for balancing investment across core business, emerging opportunities, and future possibilities.

Mehrdad Baghai, Stephen Coley, and David White (McKinsey consultants), "The Alchemy of Growth: Practical Insights for Building the Enduring Enterprise" (book, 2000)

McKinsey & Company

The Three Horizons model is widely associated with McKinsey & Company, which has published numerous articles applying the framework to different industries and contexts.

McKinsey & Company, various publications on the Three Horizons framework

*This resource was developed by **Dr. Michael Borck, Curtin Business School**, as a companion to the masterclass "AI-Driven Business Innovation." For more information or to discuss these frameworks in greater depth, please contact: michael.borck@curtin.edu.au*

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