

# ENGG4061

## Innovation and Entrepreneurship

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Discontinuous/Disruptive  
Innovation

# Examples of Disruptive Innovation

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- ❑ Ice transport and sales
  - ❑ Horse and buggy transport
  - ❑ Computer disc-drives
  - ❑ Luxury airtravel
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# Innovation Life Cycle

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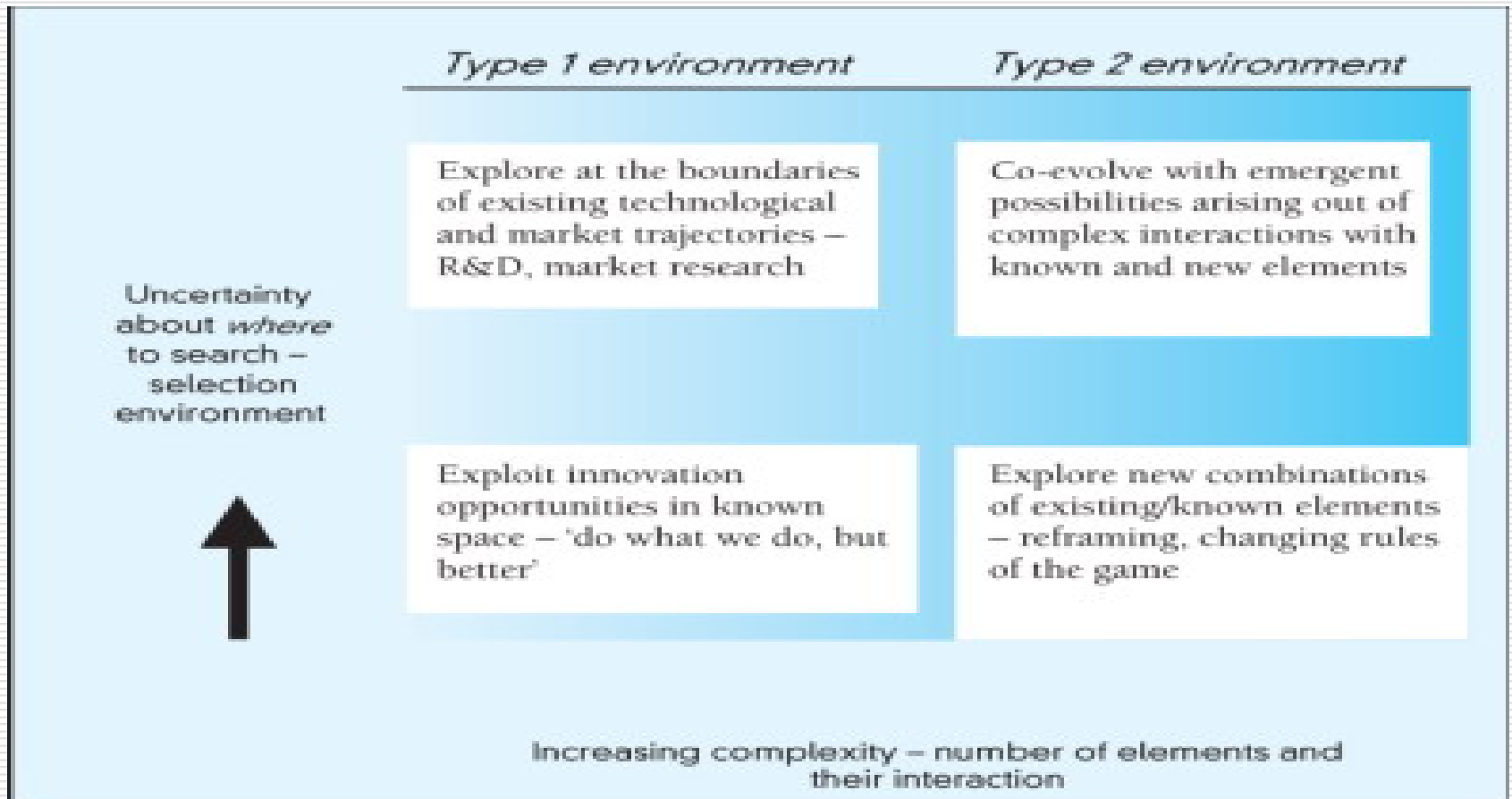
# Sources of Discontinuity

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- ❑ New markets – disc-drives
  - ❑ New technology – digital images
  - ❑ New political rules – Russia
  - ❑ Running out of road – Encyclopedia Britannica
  - ❑ Sea change – music industry
  - ❑ Deregulation – energy/telecomms
  - ❑ New business model – Amazon.com
  - ❑ Unthinkable events 9/11
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# Mapping Innovation Space

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# Different Strategies

Table 7.3 Different archetypes for steady-state and discontinuous innovation

Type 1 Innovation organization	Type 2
Operates within mental framework based on clear and accepted set of rules of the game	<i>No clear rules – these emerge over time</i>
Strategies path-dependent	<i>High tolerance for ambiguity</i>
Clear <b>selection environment</b>	<i>Path-independent, emergent, probe and learn</i>
Selection and resource allocation linked to clear trajectories and criteria for fit	<i>Fuzzy, emergent selection environment</i>
Operating routines refined and stable	<i>Risk-taking, multiple parallel bets, tolerance of (fast) failure</i>
Strong ties and knowledge flows along clear channels	<i>Operating patterns emergent and 'fuzzy'</i>
	<i>Weak ties and <b>peripheral vision</b> important</i>

# Skills for Discontinuity

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- ❑ Capability to be in the space where emergence of something new is likely to happen
  - ❑ Capability to distinguish the emergence of something new from background noise
  - ❑ Capability to act purposefully before others become aware that the rules of the game have changed
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# Appropriate Strategies for Discontinuous Innovation

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- Being there
  - Get in early
  - Pursue diversity
  - Experiment
  - Make early bets
  - Address the ambiguity of emergence
  - Think outside the square
  - Develop alternative frames eg Shell's Gamechanger
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# Good Practice for Discontinuous Innovation

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## *Type 1*

- Search
- Select
- Implement
- Strategy
- Organisation
- Linkages

## *Type 2*

- Search at the edge
  - Multiple perspectives
  - Weak market signals
  - Future orientation
  - Pluralism
  - Markets for judgment
  - Fuzzy front end
  - Flexibility/ambiguity
  - Strategic dalliances
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