

Lecture 10 - Responsible Innovation & Platform Sustainability Transition

Responsible Innovation & Platform Sustainability Transition

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What Is Innovation?

Innovation refers to the **implementation of new or significantly improved**:

- Products (goods/services)
 - Processes
 - Business models
 - Organizational methods
- (OECD, 2005)

Examples:

- **Nespresso** → Technology + business model
- **Facebook** → Digital platform, new form of communication
- **Amazon Prime** → Service innovation

⚠ These innovations were **business successes**, but also created **ethical, environmental, and societal concerns**.

? What Is Responsible Innovation (RI)?

“Responsible innovation means taking care of the future through **collective stewardship** of science and innovation in the present.”
— Stilgoe et al., 2013

Core Questions:

- Who is responsible if things go wrong?
 - What are the alternatives?
 - How will risks and benefits be distributed?
 - How do we know we are right?
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The 4 Core Principles of RI

(Stilgoe et al., 2013)

1. **Anticipation** – Think through plausible futures and outcomes.
 2. **Reflexivity** – Reflect on underlying assumptions, values, and interests.
 3. **Inclusion** – Involve stakeholders in the innovation process.
 4. **Responsiveness** – Adjust innovation direction in response to feedback and context.
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! Why Is RI Difficult for Organizations?

I. Contradictory Stakeholder Agendas

E.g. Nespresso:

- **Consumers** want convenience.
- **Shareholders** want profit.
- **Environmental groups** want sustainability.

II. Changing Social Values & Laws

- What was once acceptable (e.g., smoking) is now unethical.

III. Converging Technologies

- Emerging technologies are **hard to predict or govern**.

IV. Collingridge's Dilemma

- Early-stage tech is **easy to change** but **poorly understood**.
- Late-stage tech is **better understood** but **hard to change**.

V. Moral Overload

Too many ethical demands + limited resources = paralysis or compromise.

RI Tools & Frameworks

Value Mapping Tool (*Bocken et al., 2013*)

Stakeholder Group	Current Value	Negative Impact	Missed Opportunities	New Value Ideas
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Circular Innovation Models

- Emphasize iterative design, feedback loops, stakeholder co-creation.
- Fit better with RI than linear innovation models.

Airbnb Case Study (Simplified Value Mapping)

Stakeholder	Current Value	Negative Impact	Improvements
Guests	Authentic stays, low prices	Safety issues, discrimination, poor regulation	Rating transparency, support teams, ID verification
Hosts	Extra income, flexibility	Property damage, unstable income	Host insurance, guaranteed payments
Communities	Tourism revenue	Housing shortages, noise, gentrification	Limit short-term rentals, community funds
Environment	Decentralized stays (less impact?)	Increased carbon footprint due to travel	Promote green stays, eco filters

Responsible Platform Design

Examples:

- **Food delivery apps** → Cutlery opt-out, shared delivery times
- **Nespresso** → Coffee pod recycling
- **Grocery apps** → Delivery to neighbors at the same time

 **Who bears the burden?** Often customers are responsible for sustainable choices. Should organizations take the lead instead?

Big Data Analytics and Technology (BDAT)

BDAT = Holistic approach to collecting, managing, analyzing data for **actionable insights**.

Applications Across Functions:

- Strategy
- Product dev
- CRM

- Marketing
 - Operations
 - Financial & risk management
 - Workforce planning
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Online Food Delivery Case: Sustainability Gaps

Platforms: Deliveroo, Postmates, UberEats

Major Challenges:

- **Packaging waste** (36% of global plastic waste from packaging)
- **Carbon emissions**
- **Food waste**

Digital Ecosystem:

- Restaurants
 - Couriers
 - Customers
 - External data providers (weather, traffic, etc.)
 - Social media inputs
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Circular Participation & Sustainable Capabilities

Circular participation:

Mutual sharing of data and acting on insights across all ecosystem participants.

Sustainable capability =

Ability to orchestrate resources toward achieving sustainability goals

(Singh & El-Kassar, 2019)

Guidelines for Implementing RI

(Jarmai et al., 2020)

1. Understand RI principles and relevance.
 2. Reflect on expected benefits of RI.
 3. Secure commitment from leadership and staff.
 4. Create an action plan.
 5. Stay focused on RI objectives.
 6. Re-evaluate and adapt regularly.
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Online Resources

- RRI Tools Portal
 - Innovation Compass
 - Microsoft RI Toolkit
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Summary

- Innovation ≠ always responsible.
- RI aims to **anticipate, include, reflect**, and **respond**.
- Adoption is difficult due to complexity, change, and lack of consensus.
- Tools like **Value Mapping**, **BDAT**, and **Circular Innovation Models** support RI.
- **Platforms and ecosystems must take more responsibility**, not just offload it to users.

“Responsibility is not optional in innovation—it’s essential for long-term success.”