the Singapore WAY

STUDENT GUIDE

Economic Transformation

TEACHER GUIDE – Table of Contents

Chapter 13: Fostering Innovation and Entrepreneurship

1. Introduction to the Case

Why This Case Matters

While Singapore has long been known for logistics, finance, and stability, its newer identity as a **startup hub** represents a bold departure from its traditional risk-averse economic DNA. With **limited natural resources**, the country recognized that its future growth would depend on **ideas, intellectual property, and global talent**.

But innovation doesn't grow in chaos alone. It requires **infrastructure, policy clarity, and deep trust**. Singapore's journey shows that entrepreneurship doesn't just happen in garages—it can be designed by governments, schools, investors, and citizens working together.

What This Case Teaches

Students will explore:

- How governments can **intentionally create innovation ecosystems**
- Why **structure and risk** must be balanced—not separated
- The ecosystem players: from incubators and IP regimes to accelerators and angel investors
- How cultural values like **discipline, order, and shame** interact with failure and creativity
- Why talent pipelines (e.g., education, immigration, global exposure) matter

Global Relevance

Around the world, nations are trying to replicate Silicon Valley—but few succeed. This case highlights:

- What **Singapore got right** that others can adapt
- The risks of too much control in creative economies
- The possibilities when **policy becomes a platform—not a restriction**

Framing Questions for Discussion

- Can entrepreneurship be engineered—or must it be organic?
- What's more important in a startup ecosystem: **talent, funding, or freedom**?
- How can a society that fears failure **train people to take bold risks**?
- Should governments support startups with funding—or stay out of the way?
- What happens when startups grow—but the system that supports them doesn't?

Key Concepts in This Case

Concept	Explanation
Startup SG	A suite of Singapore government programs supporting innovation through grants, talent access, and market entry support
Block71	A startup hub and global network that began in an industrial building, now a symbol of Singapore's digital entrepreneurship
A*STAR (Agency for Science, Technology and Research)	Core R&D body funding innovation in health, tech, energy, and advanced manufacturing
SGInnovate & EDBI	Government-backed venture builders and strategic investors for deep tech and high-growth industries
Innovation Culture	The mix of mindset, values, and systems that shape how a society views risk, failure, and experimentation

This case helps students not just understand startups—but ask:

"What would it take to make innovation possible, normal, and national?"

2. Pre-Class Preparation

To get the most from this case, students should arrive with a basic understanding of:

- What makes a startup ecosystem thrive
- The challenges of building innovation culture in structured societies
- How governments, schools, and investors interact in entrepreneurial economies

This section sets them up to **analyse Singapore's model** and apply its lessons to their own context.

What to Read

- **Chapter 13 of *The Singapore Way*** by Maher Kaddoura
  Focus on:
  - Singapore's transition from a trade-driven to an idea-driven economy
  - The roles of **Startup SG, A*STAR, EDBI, SGInnovate**, and Block71
  - The importance of **public funding, trust, and risk tolerance**
  - Real examples of how cultural and educational systems were restructured for innovation

Optional Videos or Multimedia (Highly Recommended)

Title	Why It's Useful
How Singapore Supports Startups – Gov.sg or CNA	Walks through key players like SGInnovate, Enterprise Singapore, and incubators
Inside Block71: Singapore's Startup Nerve Center	Tells the story of how a warehouse became a global innovation hub
Innovation Culture vs. Control: Can They Coexist? – TEDx or Panel Clip	Sparks discussion on mindset and failure tolerance
What Makes a Startup Ecosystem Work – World Bank / WEF	Comparative case studies with global insights

Reflection Prompts to Prepare For Discussion

Ask students to write notes or mentally reflect on 2–3 of the following:

1. Have you ever had a creative idea but didn't act on it? Why not?
2. What systems (school, family, government, finance) support or block innovation where you live?
3. Do you think risk-taking is rewarded in your culture? In your education?
4. What's one startup or innovation in your country you're proud of—and what helped it succeed?
5. Should governments fund startups, or should innovation be left to the market?

Optional Research Task: Ecosystem Snapshot

Ask students to find and bring 1–2 facts about their own country's startup scene:

Element	Your Country or Region
Most prominent startup hub or district	
Top innovation sector (e.g., fintech, healthtech)	
Recent government support initiative	
Common barrier to startup success	

Instructor Setup Checklist

	Action
	Prepare an ecosystem map or timeline showing Singapore's innovation milestones
	Print or project 2 startup stories: one success, one failure
	Choose 1 short video to open class with an emotional or inspirational example
	Have a blank canvas or board for students to map ecosystem gaps in their own country

When students arrive prepared, the case moves from theory to insight—and from admiration to action.

3. Session Plan

This session is designed to help students engage with the **systems, people, and policies behind innovation**, and to reflect on what it really takes to support entrepreneurship in structured or resource-constrained environments.

Session Duration Options

Length	Format
60 min	Case discussion + innovation audit exercise
90 min	Case + ecosystem mapping + "Pitch or Pass" simulation
120 min	Full experience: deep dive discussion, innovation lab, and startup culture role-play

Learning Objectives

By the end of the session, students will be able to:

- Explain how Singapore built a startup ecosystem from policy and infrastructure
- Identify key ecosystem players (government, academia, investors, founders)
- Explore the tension between **structure and creative risk**
- Analyse cultural elements that support or hinder innovation
- Propose realistic policy or system changes to support entrepreneurship

Sample 90-Minute Session Plan

Time	Segment	Purpose
0–10 min	Warm-Up: "What Makes a Great Startup City?"	Activate local context and spark curiosity
10–30 min	Case Walkthrough: Singapore's Innovation Stack	Build shared knowledge of tools, agencies, culture
30–50 min	Ecosystem Mapping Exercise	Compare home country vs. Singapore startup environment
50–70 min	Pitch or Pass Simulation	Simulate investor/startup interaction under constraint
70–85 min	Innovation Lab (Group): Build a National Startup Plan	Apply Singapore's strategy to another nation
85–90 min	Reflection Round: "Would I Be a Founder Here?"	Explore mindset, risk tolerance, and trust

Guiding Discussion Questions

- Can governments really design innovation—or do they just get in the way?
- What's the difference between supporting entrepreneurship and **managing it**?
- What risks did Singapore take to become an innovation hub?
- What does a founder need most: money, mentorship, or freedom?
- What stops bold ideas from scaling in your country?

Optional Add-Ons

Activity	When to Use
Innovation Identity Mapping	Use early if students struggle with personal connection to risk/failure
Case Comparison: Singapore vs. Rwanda / Estonia / Chile	When teaching global innovation ecosystems
"Founder or Follower?" Self-Assessment	When exploring entrepreneurial mindset and cultural norms

This session empowers students to shift from admiring innovation to **engineering it themselves**—system by system, and step by step.

4. Case Facilitation Tools

These tools will help you break down complex innovation ecosystems into **visual, accessible, and interactive formats**. They allow students to connect **policy, people, infrastructure, and mindset** into a single entrepreneurial logic.

A. Singapore Innovation Timeline (1990–Present)

Use a visual timeline to show how Singapore built its startup ecosystem step by step:

Year	Milestone
1990s	Science parks and R&D incentives launched
2002	A*STAR funds national research across biotech, info-comm, and advanced manufacturing
2006	Biopolis and Fusionopolis innovation campuses opened
2010	Block71 startup cluster emerges
2017	Startup SG launched to centralize support
2022	Singapore deepens green tech, AI, and smart logistics innovation

Teaching Prompt:

“Which of these moves would work in your country? What’s missing in your local timeline?”

B. Startup Ecosystem Map

Build or project a Singapore startup ecosystem map showing the five core layers:

Layer	Key Elements
Policy & Capital	Startup SG, EDBI, tax incentives, grants, government venture arms
Education & Talent	NUS, SUTD, coding schools, global scholarships
Infrastructure	Fusionopolis, Block71, incubators, co-working spaces
Founders & Startups	Local unicorns, global expansions (e.g. Carousell, Ninja Van)
Culture & Community	Risk acceptance, pitch nights, failure visibility, startup media

Prompt for Group Work:

"Where is your city strongest? Weakest? What would you build first?"

C. Innovation Culture Matrix

Help students examine how values shape entrepreneurship:

Value	High-Risk Culture	Low-Risk Culture
Attitude toward failure	Celebrated as learning	Stigmatized, punished
Role of government	Minimal, laissez-faire	Supportive but managed
Education system	Open, messy, flexible	Structured, test-based
Startup capital flow	VC-driven, decentralized	Grant-based, risk-mitigated

Discussion Starter:

"Where does Singapore sit on this matrix—and why does that matter?"

D. "Pitch or Pass" Game Cards

Create or print cards with startup ideas ranging from practical to outlandish (e.g., "Smart pothole detector," "Vertical fish farming," "AI-powered elderly care"). Assign roles:

- Government funder
- Private investor
- Academic mentor
- Risk-averse traditional CEO

Prompt:

"Would you fund it? Why or why not? What's your lens?"

E. Ecosystem Design Canvas

Give students a blank "Build Your National Startup Ecosystem" worksheet with columns for:

Category	Your Country's Plan
Founders / Talent	
Funding	
Education / R&D	
Public Infrastructure	
Cultural Levers	

Encourage bold but grounded ideas: what would your **Startup SG** look like?

These tools bring abstract innovation strategy into **the language of design, dialogue, and action**—just like a great startup pitch.

5. Group Activities & Teaching Tactics

These activities immerse students in the **real tensions, ambitions, and systems** of innovation. Each task balances **design thinking, risk-taking, and strategic planning**, allowing students to step into the shoes of founders, funders, and policymakers.

Activity 1: Startup Ecosystem Design Lab

Task: Design a national startup ecosystem for a fictional or real country.

Groups must include:

- Key policy programs (like Startup SG or tax incentives)
- A startup hub strategy (e.g., how they'll create a "Block71" equivalent)
- Education/talent pipelines
- Cultural or mindset interventions
- 1 public campaign or slogan

Deliverables:

- Ecosystem map or poster
- 3-minute pitch to the class: "Why founders would come here"

Activity 2: "Pitch or Pass" Simulation

Setup: Each group gets a set of startup ideas. One team pitches. Others play roles:

- Government funders
- Private investors
- Local mayor
- Environmental or social activists

Goal: Decide whether to fund, delay, or reject—based on national goals, risk, and feasibility.

Debrief Questions:

- What factors influenced your funding choices?
- Was innovation or alignment more important?

Activity 3: Founder vs. Funder Roleplay

Scenario: A startup founder wants to build a solution for urban transport. Each stakeholder (govt, VC, incubator, competitor) has **a different agenda**.

Prompt:

"What compromises must the founder make—and what values are non-negotiable?"

Bonus Twist: Introduce a surprise economic downturn mid-negotiation.

Activity 4: Reverse-Engineer a Unicorn

Groups choose a successful Southeast Asian startup (e.g., Grab, Carousell, PatSnap).

Task:

- Map out what helped it grow (funding, infrastructure, public trust, R&D, global expansion)
- Identify what part of Singapore's system it leveraged
- Propose one system or value that could make similar success easier elsewhere

Activity 5: Innovation Culture Remix

Prompt: Redesign your country's education, work, or funding culture to be more innovation-friendly.

Must include:

- A new school subject or module
- A national campaign (e.g. "Failure Is Fuel")
- 1 reform in how success or status is measured
- What cultural tension this will face—and how to overcome it

These activities help students move beyond admiration of Singapore's startup success to **understanding how bold systems + cultural shifts make innovation possible**.

6. Assignments and Post-Class Engagement

These assignments give students the opportunity to apply insights from the Singapore startup model to their own **local ecosystems, personal ambitions, and national policies**. They're designed to build critical thinking, systems design, and startup literacy.

Assignment 1: Ecosystem Audit Essay – "What's Missing Where I Live?"

Length: 1,200–1,500 words
Prompt:
Audit your country or city's startup ecosystem using Singapore's strategy as a reference. What's working? What's missing? What one bold policy, platform, or cultural shift could unlock growth?

Your essay should include:

- A short overview of your local entrepreneurial landscape
- 3 ecosystem gaps (e.g., funding, space, mindset, R&D)
- A proposed model or program inspired by Startup SG, Block71, or A*STAR
- Risks or cultural obstacles to address

Assignment 2: Innovation Policy Pitch Deck

Format: 5–7 slide deck or 1-page proposal
Prompt:
Design a new **national program, education model, or innovation policy** that promotes entrepreneurship in your context.

Should include:

- Name and structure of your proposal (e.g., "Code for All", "Public Founders Fund")
- The ecosystem problem it solves
- A cultural insight or norm it challenges
- How success will be measured

Bonus: Add a campaign slogan or founder persona that embodies your vision.

Assignment 3: Build-a-Startup Challenge (Team Project)

Format: 3–5 minute pitch + 1-page executive summary
Prompt:
Design a startup in a key sector (e.g., healthtech, edtech, green logistics) that could launch in Singapore—or grow from your country to Singapore.

Include:

- Problem, solution, and market
- Ecosystem enablers needed (e.g., IP support, seed capital, government pilot)
- Your next 12 months of growth
- A "why us, why now" founder story

Assignment 4: Founder's Diary – Personal Narrative

Format: 500–800 word creative essay or voice note
Prompt:
Imagine you're launching a startup in Singapore (or in your home country using Singapore's model). Reflect on:

- What idea you'd pursue—and why
- What support you'd need
- What failure or resistance you'd expect
- What success would mean for your identity and purpose

Optional Add-on: "Letter to Myself in Year 3" as a founder.

Post-Class Engagement Activities

Activity	Purpose
Ecosystem Swap Meet	Pair students across countries to exchange startup insights and policy comparisons
"Startup or Safe Job?" Debate	Reflects cultural perceptions of stability, success, and boldness
Founder Field Trip	Visit a real incubator, startup hub, or innovation campus
Podcast Mini-Episode	Student-recorded "Startup Story" (fictional or real) to share startup dreams or obstacles
"My Country's Startup Poster"	Visual metaphor or branding poster showing what innovation looks like in your culture

These assignments equip students to move from **case observers to ecosystem thinkers**—building what they wish existed in their own context.

7. Assessment and Feedback Tools

This section equips you to evaluate students on **systems thinking, entrepreneurial creativity, cultural awareness, and policy design**. It balances clarity with flexibility to support various project types.

A. Essay Rubric – "Ecosystem Audit"

Criteria	Excellent (5 pts)	Good (3–4 pts)	Needs Work (1–2 pts)
Ecosystem Analysis	Deep, structured breakdown of ecosystem layers	Some elements identified, light detail	Shallow or disconnected mapping
Case Application	Strong Singapore link and comparison	Mentioned Singapore, but unclear linkage	Case absent or poorly used
Originality & Clarity	Bold and practical reform idea	Solid but needs refinement	Vague or generic proposal
Cultural Awareness	Realistic about mindset, values, or resistance	Acknowledges some barriers	Overlooks cultural realities
Writing & Structure	Well-organized and clear	Mostly clear, some flow issues	Hard to follow or lacks cohesion

Total: ____ / 25

B. Innovation Pitch Rubric – Startup or Policy Deck

Criteria	Excellent (5 pts)	Good (3–4 pts)	Needs Work (1–2 pts)
Idea Viability	Clear, creative, and feasible	Some innovation, needs refinement	Vague, generic, or unclear idea
Ecosystem Fit	Shows understanding of ecosystem enablers	Surface-level or partial alignment	Doesn't connect to realistic supports
Communication Clarity	Persuasive and visually engaging	Clear, needs polish	Confusing or overly dense
Case Connection	Inspired by Singapore or comparative model	Vaguely connected	No reference or comparison point

Total: ____ / 20

C. Personal Narrative Rubric – "Founder's Diary"

Criteria	Excellent (5 pts)	Good (3–4 pts)	Needs Work (1–2 pts)
Emotional Insight	Authentic, vulnerable, and specific	Honest but general	Surface-level or performative
Strategic Thinking	Reflects on systems or support needed	Some thought to growth path	Lacks planning or realism
Cultural Lens	Reflects context-based challenges	Aware of potential norms or resistance	Ignores place-based nuance
Creativity & Voice	Unique, bold, and compelling	Some originality	Generic or uninspired

Total: ____ / 20

Quick Feedback Prompts

Use these for reflection, exit slips, or peer feedback:

- "The biggest myth I believed about innovation was…"
- "What surprised me most about Singapore's startup strategy was…"
- "In my country, the one thing I'd fix first is…"
- "I used to think founders were born. Now I think…"
- "This made me rethink ___ about risk, failure, or funding."

These tools help you recognize not just who understood the case—but who is beginning to **think, build, and speak like a systemic innovator**.

8. Instructor Notes and Commentary

This section offers guidance for **framing the case, managing classroom dynamics, and navigating tensions between freedom, control, and innovation**—especially in cultures where entrepreneurship isn't the default path.

Core Framing Insight: Innovation Can Be Designed

Help students see that innovation isn't just a mindset—it's the outcome of:

- **Clear systems and access points**
- **Trust and psychological safety**
- **Infrastructure, mentors, and public support**
- And yes—**cultural norms around failure, pride, and control**

Singapore is proof that a **high-control society can still produce high-creativity outcomes** when the right supports are in place.

Common Reactions & Reframing Tips

Student Response	Instructor Response
"Innovation has to be messy—how did Singapore do this?"	Ask: What systems helped protect experimentation? What mindsets had to shift?
"My country has talent, but the system is broken."	Invite them to map which system changes would unlock that talent.
"Government shouldn't fund startups—it distorts the market."	Encourage debate: What are the risks of no support vs. over-control?
"We don't celebrate failure in my culture."	Use case examples to show how **policy and public narrative** can reframe this.

Facilitation Tactics

Use This If...	You Want To...
Founder vs. Funder Roleplay	Teach decision-making and stakeholder alignment
Pitch-or-Pass Simulation	Explore evaluation logic and funding priorities
Innovation Culture Matrix	Reveal how mindset + system shape real opportunity
Ecosystem Mapping Comparison	Help students localize the case and see their role

Suggested Anchor Quote

"Innovation is not about ideas—it's about permission, platforms, and the people willing to try again."

Use this to help students connect startup success not just to talent—but to the **systems that believe in and back boldness**.

Ideal Pairings from Other Chapters

Other Case	Why Pair It?
Chapter 3 – Systems Thinking	Explore innovation as layered design
Chapter 7 – Human Capital	Show how talent development supports startups
Chapter 10 – Governance & Trust	Explore how policy legitimacy affects startup participation
Chapter 12 – Sustainability Strategy	See how green startups and tech ecosystems overlap

9. Additional Resources

These curated resources will help students **go deeper into Singapore's startup strategy**, compare innovation models globally, and explore what makes ecosystems thrive beyond hype.

Recommended Readings & Reports

Title	Source	Why It's Useful
Startup SG Resource Guide	Enterprise Singapore	Overview of Singapore's startup support stack, grants, and public-private accelerators
The Deep Tech Primer	SGInnovate	Explains how Singapore supports high-tech, high-risk innovation in health, AI, and robotics
Global Startup Ecosystem Report	Startup Genome	Comparative insight into Singapore vs. global hubs (e.g., Berlin, Tel Aviv, Nairobi)
From Zero to IPO: Singapore's Unicorn Journey	EDBI / PwC	Case studies of regional success stories and exit pathways
Innovation and Cultural Mindsets	MIT REAP / Stanford SEED	Research on how education and national values shape entrepreneurial behavior

Videos & Documentaries

Title	Platform	Focus
Singapore: Southeast Asia's Startup Powerhouse	CNA Documentary	Real stories from founders, investors, and policymakers
Inside Block71	YouTube	A look into Singapore's first and most iconic startup space
The Role of Government in Startups	WEF / Davos Talk	Pros and cons of public sector leadership in innovation
Unicorns, Failures, and Founders	TEDx Singapore	Stories of courage, cultural shame, and the cost of success
Deep Tech Nation	SGInnovate Short Film	How science meets startups in Singapore's R&D engine

Online Tools & Data Portals

- https://www.startupsg.gov.sg – Official portal for grants, founder support, and startup programs
- https://sginnovate.com – Deep tech builder and funding ecosystem
- https://edbi.com – Government-linked investor focused on strategic growth areas
- https://worldbank.org/startuppolicy – Startup-friendly policy frameworks and diagnostics
- https://startupsgenome.com – Global ecosystem benchmarking and analysis

Other Ecosystems to Explore for Comparison

City / Country	Why It's Relevant
Tel Aviv, Israel	Military R&D, tech talent pipeline, and global VC funding in a high-risk region
Kigali, Rwanda	Emerging startup culture with strong government infrastructure support
Berlin, Germany	Diverse, low-cost creative environment with strong social entrepreneurship scene
Bangalore, India	Regional tech superpower balancing scale, chaos, and innovation
Tallinn, Estonia	Digital-first nation with e-government, remote-friendly laws, and startup visas