Teaching guide: Illuminating innovation – beyond the light-bulb moment

Oct 23, 2026 · @john bessant

At a glance

This guide helps you run a session on Thomas Edison that moves learners from the lightbulb myth to the idea that innovation can be organised and managed. It is built from the episode *Illuminating innovation – beyond the light-bulb moment* (published 5 October 2026), and its ten lessons.

Episode	Illuminating innovation – beyond the light-bulb moment, Origin Files
Length	About 20 minutes to read or listen (the post is roughly 3,000 words)
Best-fit audiences	Undergraduate and MBA innovation or entrepreneurship modules; executive education; in-company innovation teams; upper-secondary business or design students; founders in one-to-one coaching
Time options	50 minutes, 90 minutes, half-day workshop (see Session plans)

Learning outcomes. By the end of the session, learners will be able to:

1. **Explain** why the "lightbulb moment" is a misleading picture of innovation, using evidence from Edison's career.
2. **Distinguish** invention from innovation, using the vote recorder and the Pearl Street system as contrasting cases.
3. **Analyse** how Menlo Park organised innovation as a repeatable process: team diversity, rapid prototyping, constraints, recombination and documentation.
4. **Evaluate** the limits of Edison's model, including his weaknesses and the war of the currents.
5. **Design** one change to their own team or venture that borrows a Menlo Park routine.

Key concepts. Invention versus innovation · innovation as a managed process (routines, "the way we do things round here") · innovation ecosystems and networks · diversity and recombination · prototyping and the minimum viable product · creativity under constraints · systems thinking and complementary assets · pivoting · organisational memory and knowledge management.

A note on honest history. Several Edison stories are better known than they are documented. The guide marks these as *legend* or *reported* so you can use them as a lesson about evidence, not just as colour. The main ones are listed in the case summary handout.

Before the session

Learners arrive having met the story once, so session time goes on the ideas, not the plot.

Option	What learners do	Time
Full	Read or listen to the episode	About 20 min
Light	Read the one-page case summary (Handout 1) and lessons 1, 2 and 8 only	About 10 min
Video	Watch the episode on the Managing Innovation YouTube channel, then skim the ten lesson headings	About 25 min

Pre-work questions (ask learners to bring a few lines on each):

1. Before reading, finish this sentence: "Edison is famous for…". After reading, what would you change?
2. Edison's first patent, the electric vote recorder, worked perfectly and failed. Why?
3. Which of the ten lessons surprised you most, and which do you see (or not see) in an organisation you know?

Question 1 gives you a before-and-after record of the myth shifting, which is useful in the opening activity.

The question ladder

Nine questions climb from understanding the story to designing something new. Use them in order; each rung needs the one below.

Rung 1: Understand

Q1. What did Edison actually contribute to electric light, if he didn't invent the lightbulb?

- *Good answer:* Others (Swan, Woodward and Evans) had worked on incandescent light for decades. Edison's team found a durable filament (carbonised cotton, then bamboo) and, crucially, built the whole system: dynamos, wiring, meters, fuses, and the Pearl Street station (4 September 1882, 85 customers, around 400 lamps).
- *Misconception:* "He invented the bulb." Or the opposite: "He stole it, so he contributed nothing."
- *If stuck:* "What would a bulb have been worth in 1880 without a socket to plug it into?"

Q2. What was the "invention factory", and what made it different from an inventor's workshop?

- *Good answer:* A purpose-built lab at Menlo Park (1876) with a list of target inventions, a diverse team, machine shop and apparatus under one roof, and investor funding. It aimed to make invention repeatable: "a minor invention every ten days and a big thing every six months or so".
- *Misconception:* That it was just a bigger workshop. The point is the process and the routines, not the size.
- *If stuck:* "What does a factory do that a craftsman doesn't?"

Rung 2: Apply

Q3. Use the vote recorder and the Pearl Street station to explain the difference between invention and innovation.

- *Good answer:* The vote recorder worked but nobody wanted it: politicians valued slow roll calls for horse-trading. That is invention without adoption. Pearl Street put a working idea into use, at scale, against a rival (gas) on price. Innovation = creating value from ideas.
- *Misconception:* That the vote recorder failed technically.
- *If stuck:* "Who was the user, and what did they actually want?"

Q4. Pick two of the ten lessons and find a present-day organisation that applies each one.

- *Good answer:* Specific examples with a clear link, such as rapid prototyping in a design consultancy (lesson 5) or a pivot like a company repurposing assets (lesson 9).
- *Misconception:* Picking famous brands with no evidence of the practice.
- *If stuck:* Give the lesson a modern label first (MVP, pivot, knowledge management) and search from there.

Rung 3: Analyse and evaluate

Q5. How do the ten lessons fit together? Which are about people, which about process, and which about the market?

- *Good answer:* People: lone-genius myth, diversity (lessons 1, 3). Process: journey not flash, perseverance, prototyping, constraints, recombination, memory (2, 4, 5, 6, 7, 10). Market and strategy: invention is not enough, the pivot (8, 9). Strong answers spot links, such as how constraints (6) drove the filament search (4).
- *Misconception:* Treating the ten as a checklist rather than a system.
- *If stuck:* Give groups the ten lessons on cards to sort.

Q6. Edison claimed to deliver a minor invention every ten days. Is organised innovation always better than the lone inventor? When might it fail?

- *Good answer:* Organisation brings repeatability, scale and learning, but can breed rigidity. Edison's own war of the currents against AC shows commitment turning into stubbornness. Tesla left feeling cheated. Strong answers weigh both sides and use evidence.
- *Misconception:* Hero worship, or dismissing Edison as a mere self-publicist.
- *If stuck:* "Where in the story did Edison's strengths become weaknesses?"

Q7. Which Edison stories are well documented, and which are legend? Does it matter for the lessons?

- *Good answer:* Documented: patents, Pearl Street, the Mallory battery conversation (recalled by Mallory himself), the 1914 fire. Legend or uncertain: the "10,000 ways" quote, beard hairs as filament, the "addled" teacher. Good answers note that legends spread because they carry a lesson, and that this is itself part of how myths of innovation form.
- *Misconception:* That a lesson is only valid if the anecdote is true, or that it doesn't matter at all.
- *If stuck:* "Who told this story first, and what did they gain from it?"

Rung 4: Create

Q8. Design a "mini Menlo Park" for a team you know. Which three routines would you put in place first, and why?

- *Good answer:* Three concrete routines tied to lessons, such as a prototype-within-48-hours rule, a mixed-discipline team, and a shared lab notebook. Each with a reason and a cost.
- *Misconception:* Copying the surface (a playful culture, pie at midnight) without the underlying process.
- *If stuck:* Start with the team's biggest frustration and pick the lesson that addresses it.

Q9. Edison's "Edison effect" sat unused for twenty years until Fleming turned it into the thermionic valve. What is sitting in your organisation's notebooks, and how would you find it?

- *Good answer:* A practical method for surfacing dormant knowledge (an audit, a review of abandoned projects, cross-team showcases), with a named example.
- *Misconception:* That documentation alone is enough, without anyone ever looking back.
- *If stuck:* "What project did your team drop in the last three years, and why?"

Challenges

Three tasks of rising difficulty: a warm-up, an in-session build, and a take-away project.

Challenge 1 – The pear-shaped bulb (10 minutes, warm-up). Give pairs an odd-shaped container (a bottle, a mug) and ask: "What is its volume?" Most will start calculating. Then tell the Upton story: Edison filled the bulb with water and poured it into a measuring glass. (Edison liked to tell this one himself, so treat the details as his version.)

- *Deliverable:* each pair writes one sentence on what the story says about prototyping versus analysis, and one situation where calculation really is the better route.

Challenge 2 – Beat gas (30 to 40 minutes, in session). Edison's lighting system had to beat gas on price. Upton's maths showed that thick copper wires would make it ruinously expensive, so the constraint became the brief: a high-resistance filament on low current. Groups take a current problem with a hard constraint (a product that must cost under £10, a service delivered in 24 hours, a process with zero waste) and turn the constraint into a design brief.

- *Deliverable:* a one-page brief stating the constraint, what it rules out, what it forces, and two ideas it produces.

Challenge 3 – The Menlo Park audit (take-away project, one to two weeks). Learners apply the ten lessons to a real organisation, team or venture they can observe or interview.

- *Deliverable:* a 1,500-word report (or a 10-minute presentation) that scores the organisation on each lesson (strong, partial, absent) with evidence, identifies the two biggest gaps, and proposes one routine to close each. It must include one honest limit of the Edison model for this setting.

Activities

Six activities cover small groups, large rooms, online and one-to-one settings. Each feeds the session plans below.

A. Lightbulb poll, before and after (large group, 10 min + 5 min)

- *Materials:* a live poll tool or coloured cards.
- *Steps:* At the start, ask: "Who invented the lightbulb?" and "Is innovation mostly a flash of insight or mostly a managed process?" (scale 1–5). Record results. Repeat the second question at the end.
- *Debrief:* What shifted, and why? What evidence moved you? Where does the lightbulb image still help?

B. Ten-lesson jigsaw (small groups, 35 min)

- *Group size:* five "home" groups of four to six.
- *Materials:* the ten lessons, two per card (pair 1 and 3, 2 and 4, 5 and 6, 7 and 10, 8 and 9).
- *Steps:* Each person in a home group takes one card and joins an "expert" group with the same card (12 min) to agree a two-minute explanation and a modern example. They return home and teach the others (15 min). Home groups then pick the single lesson most missing in organisations they know (8 min).
- *Debrief:* Which pairings fit naturally? Which lesson did most groups pick, and why is it so often missing?

C. The Menlo Park team role play (small groups, 30 min)

- *Group size:* six per group.
- *Roles:* Edison, Batchelor (machinist), Kruesi (clockmaker), Boehm (glassblower), Upton (mathematician), and a Morgan-side investor.
- *Scenario:* It is late 1878. Edison has publicly promised working electric light in weeks; the filament keeps failing. The investor wants a date. Each role argues for the next step from their own expertise.
- *Debrief:* Whose knowledge mattered most, and when? What did the public promise do to the team (lesson 6)? Who would be missing from your own team?

D. Structured debate: "Edison was a manager, not a genius" (large or small group, 25 min)

- *Steps:* Two sides, three speakers each, two minutes per speaker, then open floor. Require evidence from the episode, and at least one point from each side that marks a story as legend.
- *Debrief:* Is the either/or framing useful? What does the 1% inspiration, 99% perspiration line (widely attributed to Edison, wording varies) actually claim?

E. Online discussion board (asynchronous, one week)

- *Prompt:* "Edison's documentation produced the 'Edison effect', which sat unused for twenty years until Fleming made the radio valve. Describe one idea, failure or side result in your organisation that was recorded and later reused, or lost and later regretted. What would have helped?"

- *Requirements:* a 200-word post, plus replies to two classmates linking their case to one of the ten lessons.
- *Debrief (tutor summary):* group the posts by barrier (no record, no retrieval, no one looking).

F. Coaching conversation: your invention factory (one-to-one, 30–45 min)

- *Steps:* Ask the coachee to describe how a new idea moves through their team or venture, from first thought to customer. Then work through four of the lessons as questions:
    a. Who is in your network that you couldn't do it without? (lesson 1)
    b. How fast do you get from idea to something someone can touch? (lesson 5)
    c. What's your vote recorder: something that works but no one is buying? (lesson 8)
    d. Where is your record of what didn't work? (lesson 10)
- *Close:* agree one routine to try for a month, and how they'll know it's working.

Session plans

All three plans follow the same arc: story first, concept second, your own world third. Learners are active within the first ten minutes in each.

50 minutes (lecture or seminar)

Time	Activity	Mode
0–8	Lightbulb poll (A), first round	Large group
8–18	Tutor tells the story in three beats: news butcher to invention factory; the filament and Pearl Street; the vote recorder	I do
18–33	Q3 and Q5 in think-pair-share	We do
33–43	Challenge 1, the pear-shaped bulb	Pairs
43–50	Poll second round; each learner writes one routine they'd borrow (Q8, short form)	You do

90 minutes (workshop or MBA class)

Time	Activity	Mode
0–10	Lightbulb poll (A); share pre-work question 1	Large group
10–20	Story recap and the invention-versus-innovation contrast (Q1–Q3)	I do
20–55	Ten-lesson jigsaw (B)	Small groups
55–75	Challenge 2, beat gas	Small groups
75–85	Q6 and Q7 as a plenary: limits and legends	We do
85–90	Poll second round; set Challenge 3 as take-away	You do

Half-day workshop (3.5 hours with a break)

Time	Activity	Mode
0:00–0:15	Lightbulb poll (A) and pre-work question 1	Large group
0:15–0:35	Story and concepts, Q1–Q3	I do
0:35–1:10	Ten-lesson jigsaw (B)	Small groups
1:10–1:40	Menlo Park role play (C)	Small groups
1:40–1:55	Break	
1:55–2:20	Structured debate (D), using Q6 and Q7	Whole room
2:20–2:55	Challenge 2 on the participants' own constraints	Small groups
2:55–3:20	Q8: each person designs their mini Menlo Park; pairs critique	You do
3:20–3:30	Poll second round, commitments, Challenge 3 as follow-up	Large group

Assessment ideas

Formative check (5 minutes, end of any session). A three-line exit ticket: one lesson I now understand differently; one Edison story I'd check before repeating; one routine I'll try.

Short written assignment (800–1,000 words). "Using Edison's career, argue whether innovation can be managed. Draw on at least four of the ten lessons, address one limitation of his model, and handle at least one contested story with appropriate caution." The take-away version is Challenge 3.

Marking rubric

Criterion	Developing	Competent	Excellent
Grasp of concepts	Restates lessons without linking them	Explains lessons and how two or three connect	Treats the lessons as a system and links them to named concepts (e.g. complementary assets, MVP)
Use of evidence	Relies on anecdote; repeats legends as fact	Uses documented examples; some care with sources	Distinguishes documented from legendary and explains why it matters
Critical judgement	One-sided praise or dismissal	Notes a limitation	Weighs strengths against limits, e.g. the war of the currents
Transfer	No link to present practice	A plausible modern example	A specific, well-argued application to a named organisation

Adapting it

- **Upper-secondary school.** Use the light pre-work option and the 50-minute plan. Lean on Challenge 1 and the role play; drop Q6. The news-butcher years and the phonograph "Mary had a little lamb" moment hook younger learners well.
- **Undergraduate.** Use the 90-minute plan. Emphasise Q3 and Q5 and link to invention versus innovation and the innovation process in the core textbook. Set the short written assignment.
- **MBA and executive.** Lead with Q6 and Q8, and the debate (D). Ask participants to bring a constraint and a "vote recorder" from their own work. Push on the dark side: stubbornness, the AC fight, how credit was shared.
- **In-company and practitioners.** Use the half-day plan with participants' own projects in Challenge 2. Close with the coaching questions from activity F as a pairs exercise, and agree one routine per team to trial for a month.

Handouts

Handout 1: Case summary and timeline

Thomas Alva Edison (1847–1931) held 1,093 US patents, and his electric companies became the foundation of General Electric. He had barely any formal schooling. He began as a railway "news butcher", became a travelling telegraph operator, and made his first fortune selling an improved stock ticker. With the proceeds he built an "invention factory" at Menlo Park, New Jersey: a lab, a machine shop and a deliberately mixed team (the "muckers") working through a list of target inventions. He didn't invent the lightbulb; he made it practical and, more importantly, built the whole system to deliver electric light at scale.

Year	Event
1847	Born in Milan, Ohio
1859	Starts work on the Grand Trunk Railway, aged 12
1862	Rescues Jimmie MacKenzie; learns telegraphy from the boy's father
1869	First patent: the electric vote recorder, which no one wanted
1870	Sells the improved stock ticker for $40,000; opens Newark workshops
1874	Quadruplex telegraph: four messages on one wire
1876	Opens the Menlo Park laboratory
1877	Carbon-button telephone transmitter; the phonograph
1878	Edison Electric Light Company, backed by J.P. Morgan and the Vanderbilts
1879	Carbonised cotton filament glows for over 13 hours
1882	Pearl Street station: 85 customers, around 400 lamps

Year	Event
1914	Fire at West Orange; he starts again the next day
1931	Dies on 18 October

Documented, reported or legend?

Story	Status
A teacher called him "addled"	Family lore; told as "the story goes"
The clockwork device that signalled while he slept	His own later account
"I have not failed. I've just found 10,000 ways that won't work"	Probably apocryphal; the Mallory battery conversation is the better-sourced version
Hairs from a colleague's beard tested as filament	Legend
The Upton pear-shaped bulb	Edison's own favourite anecdote
"Genius is 1% inspiration…"	Widely attributed; wording varies
"We had a hell of a good time spending it" (ore venture)	Reported

Handout 2: Question sheet

1. What did Edison contribute to electric light, if he didn't invent the bulb?
2. What made the "invention factory" different from an inventor's workshop?
3. Why did the vote recorder fail, and why did Pearl Street succeed?
4. Sort the ten lessons into people, process and market. How do they connect?
5. When might organised innovation fail? Use one example from Edison's career.
6. Which Edison stories would you check before repeating, and why does it matter?
7. Design a "mini Menlo Park" for your team: three routines, and why.
8. What's sitting in your organisation's notebooks that might be worth revisiting?

Further reading

- Illuminating innovation – beyond the light-bulb moment, the episode.
- The Thomas Edison Papers, Rutgers University: digitised notebooks and correspondence, ideal for the organisational memory lesson.
- Paul Israel, *Edison: A Life of Invention* (1998): the standard scholarly biography.
- André Millard, *Edison and the Business of Innovation* (1990): Edison as organiser and businessman.
- Andrew Hargadon, *How Breakthroughs Happen* (2003): Menlo Park as a technology broker recombining ideas across industries.

- Steven Johnson, *How We Got to Now* (2014), the chapter on light: the lightbulb as a network, not a lone invention.
- Joe Tidd and John Bessant, *Managing Innovation*: invention versus innovation and innovation as a managed process.
- Lorin Anderson and David Krathwohl (eds), *A Taxonomy for Learning, Teaching, and Assessing* (2001): the revised Bloom's taxonomy behind the question ladder.
- Jamie Dobson, *Visionaries, rebels and machines, (2025)* book and Substack with rich video and text resources describing Edison and his contribution to the development of today's electronics industry

Full references and links

- Bessant, J. (2026) 'Illuminating innovation – beyond the light-bulb moment', *Managing Innovation* (Substack), 5 October. Read the episode.
- Thomas A. Edison Papers (n.d.) *The Thomas A. Edison Papers Digital Edition*. New Brunswick, NJ: Rutgers University. Digital edition · About the project.
- Israel, P. (1998) *Edison: A Life of Invention*. New York: John Wiley & Sons. ISBN 978-0-471-52942-2. Publisher page.
- Millard, A. (1990) *Edison and the Business of Innovation*. Baltimore, MD: Johns Hopkins University Press. Publisher page.
- Hargadon, A. (2003) *How Breakthroughs Happen: The Surprising Truth About How Companies Innovate*. Boston, MA: Harvard Business School Press. ISBN 978-1-57851-904-0. Publishers Weekly listing.
- Johnson, S. (2014) *How We Got to Now: Six Innovations That Made the Modern World*. New York: Riverhead Books. See the chapter 'Light'.
- Tidd, J. and Bessant, J. (2020) *Managing Innovation: Integrating Technological, Market and Organizational Change*. 7th edn. Hoboken, NJ: John Wiley & Sons. ISBN 978-1-119-71330-2. Publisher page.
- Anderson, L.W. and Krathwohl, D.R. (eds) (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Dobson, J. (2025) *Visionaries, Rebels and Machines*. Right Book Press. Review in Retail Insider · Jamie Dobson's Substack · RedMonk interview: 'From Light Bulbs to Large Language Models'.