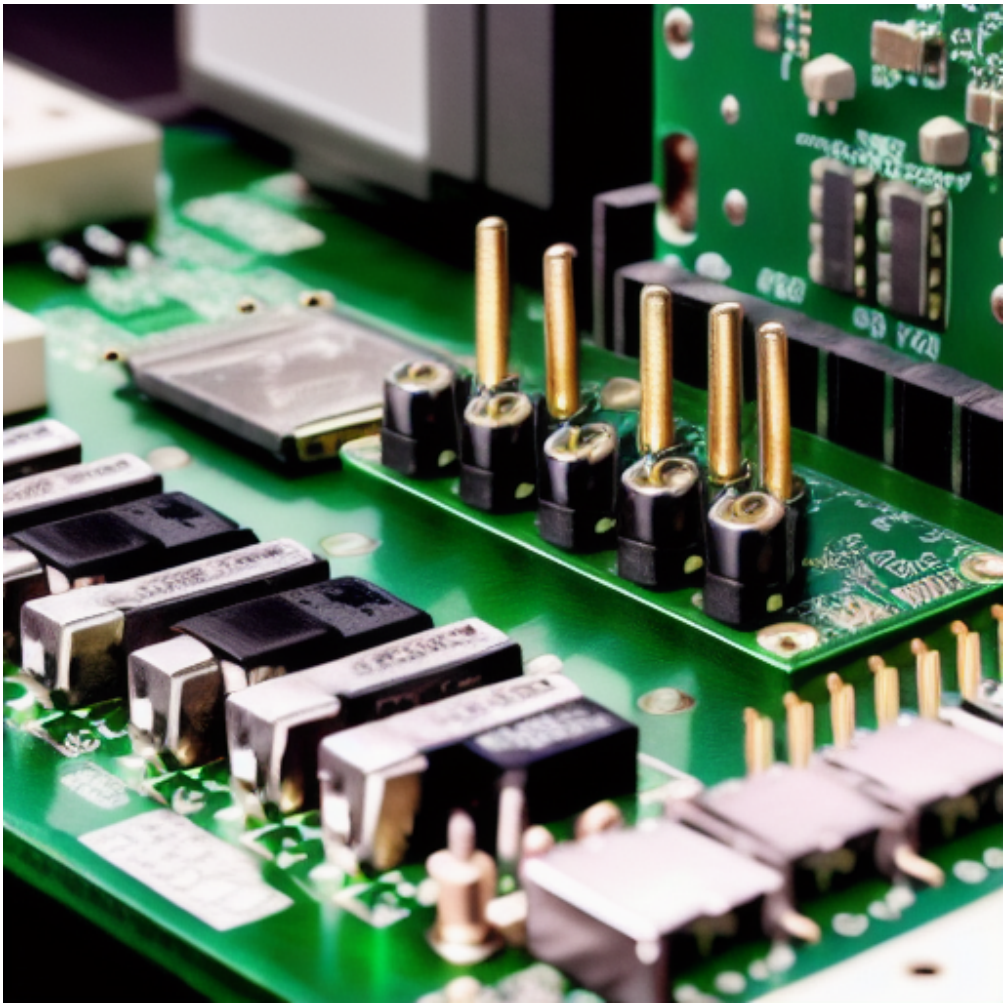
Making the Future Legible

Speculative design, prototypes, and research methods for medical and charging hardware

Speculative Devices — First Edition — July 2026



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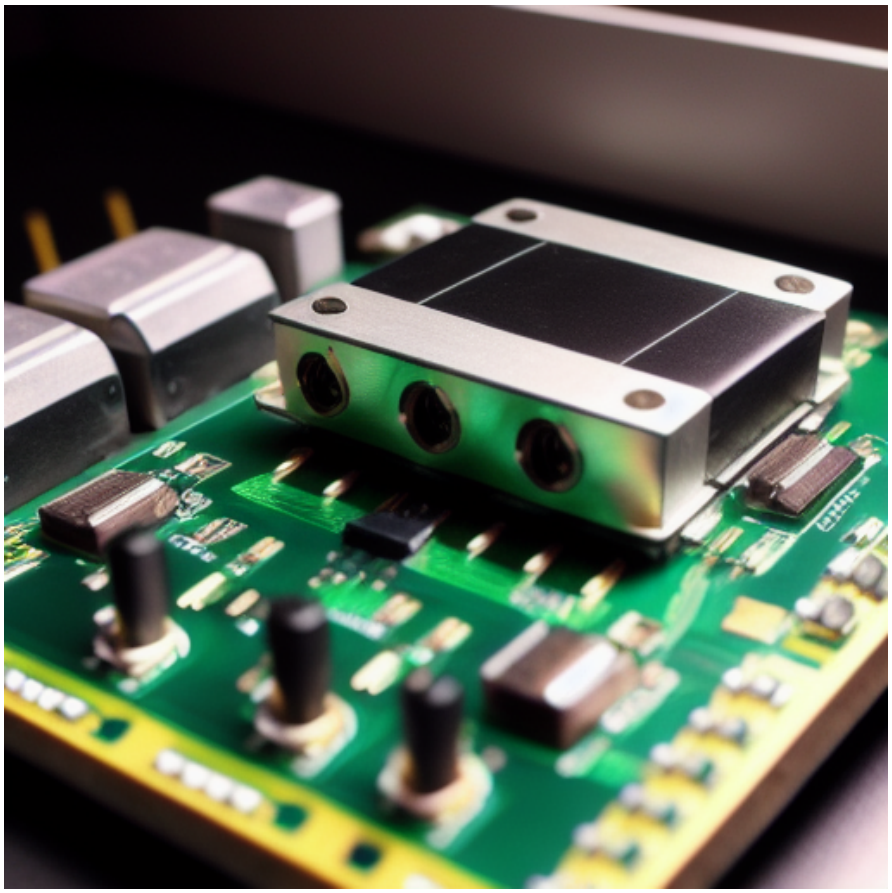

Foreword

Speculative design gets misread as science fiction with better renderings. It is something more useful: a rigorous method for making possible futures concrete enough to examine, argue with, and learn from before anyone commits to building them. A speculative device is not a product pitch. It is a question rendered in hardware — a way to ask "what if healthcare technology worked like this?" precisely enough that the answer teaches you something real.

This handbook is grounded in how the studio actually works in 2026, when hardware frontiers are moving fast — megawatt charging systems entering commercial deployment, liquid-cooled connectors, hands-free robotic charging arms — and the gap between what is imaginable and what is buildable is narrowing in interesting ways. We wrote the book we wish we'd had on our first concept study: specific about method, honest about the difference between a provocation and a product, and

clear that the value of the work is in the thinking it forces.

Read it once through, then keep it on the bench. The checklists closing each chapter are meant to structure a studio practice, not decorate it.

Chapter 1 — What a Speculative Device Is For

A speculative device exists to make a future legible. Its job is not to ship, sell, or pass regulatory review; its job is to take an abstract question about technology, care, or human interaction and turn it into something you can hold, critique, and reason about. The device is an instrument of inquiry. Judge it by what it reveals, not by whether it could go to market tomorrow.

This is a genuinely different discipline from product development, and confusing the two wastes both. Product design converges toward a shippable answer under real constraints; speculative design deliberately opens up the question, sometimes exaggerating or isolating a variable to see it clearly. A concept study that provokes a hard conversation about a medical technology's implications has succeeded even if — especially if — it was never meant to be manufactured.

Anchor every project in the question it exists to explore, and resist the pull to prematurely turn a provocation into a product.

Field Checklist

- State the question each device exists to explore
- Judge the work by insight, not market-readiness
- Keep speculative and product design methods distinct

Chapter 2 — From Provocation to Concept Study

Every study begins with a provocation — a "what if" sharp enough to be worth exploring. The craft of the studio is turning that spark into a disciplined concept study: bounding the question, choosing what to make concrete and what to leave abstract, and deciding what the artifact must demonstrate to be worth building. A vague provocation produces a vague object; a well-framed one produces a device that teaches.

Framing is the underrated skill. The best concept studies isolate a single meaningful variable — a new interaction, a shifted assumption about who operates a device, a changed relationship between patient and machine — and hold everything else steady, so the artifact makes one idea unmistakably visible. Trying to say five things at once produces an object that says nothing clearly.

Invest heavily in framing before fabrication. A precisely scoped provocation is worth more than a beautifully finished object exploring a muddy question.

Field Checklist

- Start from a sharp, specific provocation
- Isolate one meaningful variable per concept study
- Frame precisely before committing to fabrication

Chapter 3 — The Prototype as Argument

A prototype is not a rough draft of a product; it is an argument made physical. When a concept study moves from sketch to working build, the prototype's purpose is to make a claim undeniable — to let a viewer experience an idea rather than merely be told it. A functional mockup that lets someone feel what a proposed interaction is like carries more force than any slide deck describing it.

The rigor is in matching fidelity to purpose. A prototype should be exactly as finished as its argument requires and no more. Over-building wastes time on polish that adds nothing to the claim; under-building leaves the argument unconvincing. The six-month journey from initial sketch through functional prototype to exhibition is a series of decisions about what to make real and what to leave suggested, each governed by what the argument needs.

Build prototypes to make arguments, and calibrate fidelity to the claim rather than to the desire to impress.

Field Checklist

- Treat each prototype as a physical argument
- Match fidelity to the claim, not to polish
- Let the argument decide what to build and what to suggest

Chapter 4 — Research Notes and Honest Documentation

The artifact is only half the output; the documentation is the other half. Research notes, design journals, and methodology records are what turn a one-off object into transferable knowledge. A speculative device that no one can learn from beyond the room it sat in has under-delivered. Honest documentation — including what failed, what was abandoned, and what surprised the studio — is what makes the practice cumulative rather than merely episodic.

Honesty here is a discipline. It is tempting to document only the clean narrative, the sketch-to-triumph arc. But the dead ends and reframings are often where the real learning lives, and a studio that records them builds a body of knowledge future projects can stand on. Being featured in a design research anthology is validation, but the deeper value is that the methodology becomes legible and reusable.

Document methodology and failure as rigorously as outcomes. The notes are where episodic projects become a cumulative practice.

Field Checklist

- Document methodology, not just finished artifacts
- Record dead ends, reframings, and surprises
- Make research notes transferable beyond the studio

Chapter 5 — Reading the Signals: Charging Hardware in 2026

Speculative work does not happen in a vacuum; it reads the real technical frontier for signals worth extrapolating. Charging hardware in 2026 offers rich material. Megawatt Charging Systems entered

commercial deployment, delivering over 1 MW to recharge heavy-duty batteries within a driver's break — a scale that reshapes assumptions about time, thermal load, and infrastructure. At those power levels, currents in the thousands of amperes force liquid-cooled cables and connectors, turning a mundane plug into a serious materials-and-thermal design problem.

Autonomy adds another signal. Hands-free robotic charging — an overhead arm with computer vision achieving very high plug-in success rates for autonomous fleets — points toward a future where the human is removed from the interaction entirely. For a speculative studio, these are not just engineering facts; they are provocations. What does care look like when the machine handles the machine? What new human roles and anxieties appear when hardware becomes autonomous and enormously powerful?

Track the real frontier closely, and mine emerging hardware for the questions it quietly raises about human roles and care.

Field Checklist

- Track real hardware frontiers as source material
- Extrapolate technical trends into human-centered questions
- Ground speculation in verifiable current developments

Chapter 6 — Ethics of Imagining Medical Technology

Imagining medical technology carries responsibility, because the images we make shape what people believe is desirable and inevitable. A speculative device that glamorizes surveillance, erodes consent, or treats patients as data sources normalizes those futures even when it means to critique them. The studio's ethical task is to imagine critically, not just impressively — to use provocation to surface the values at stake, not to launder troubling directions in beautiful design.

This is why framing and documentation matter ethically, not just methodologically. A provocation presented without its critical frame can be mistaken for an endorsement. The responsible studio makes its stance legible: this is a warning, this is an open question, this is a future we should interrogate before we build it. In medical contexts especially, where dignity, autonomy, and vulnerability are always present, the imagination must be accountable.

Imagine responsibly. Make the critical stance of each provocation explicit, and never let striking design smuggle in an unexamined future.

Field Checklist

- Interrogate the values each concept normalizes
- Make the critical stance of a provocation explicit
- Hold medical speculation to a standard of dignity

Chapter 7 — Communicating Research to the World

Speculative research earns its value in the conversation it starts, which means communication is core work, not afterthought. Talks, panels, workshops, exhibitions, and publications are how a concept study reaches the designers, clinicians, students, and institutions who can carry the thinking forward.

A brilliant device seen by no one changes nothing; the same device well-communicated can shift how a whole field imagines its options.

Different audiences need different framings. A conference audience wants the methodology and the provocation; a student workshop wants the hands-on method they can practice; the press wants the vivid image and the clear stakes. The studio that can translate its research across these registers — without diluting the rigor — multiplies its impact and turns individual studies into a durable public contribution.

Treat communication as part of the research, and translate the work faithfully across talks, workshops, and exhibitions to widen its reach.

Field Checklist

- Plan communication as part of every project
- Translate research faithfully for each audience
- Use talks, workshops, and exhibitions to extend impact

Conclusion: The Discipline of Disciplined Imagination

Speculative design looks, from the outside, like the freest kind of work — imagination unbound. From the inside it is the opposite: a discipline of disciplined imagination, where every provocation is framed, every prototype is an argument calibrated to its claim, every failure is documented, and every striking image is held accountable to the future it makes desirable. The freedom is real, but it is earned by rigor.

In 2026, with the hardware frontier moving fast — megawatt power, liquid-cooled connectors, autonomous robotic charging — the raw material for meaningful speculation is abundant. The studio's job is to turn those signals into legible questions about care, autonomy, and human roles, and to make those questions concrete enough that others can think alongside us.

Frame precisely. Build to argue. Document honestly. Imagine responsibly. Communicate widely. Do that, and a speculative device stops being a curiosity and becomes what it should be: an instrument that makes a possible future legible enough to choose wisely.

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ABOUT THE FOUNDER

Devin Lockett

Devin Lockett is the founder and entrepreneur behind this title and the wider BiomedRx family of companies-spanning healthcare technology, wellness, media, and community initiatives. He builds brands focused on quality, service, and independent ownership.