

Education & Experience Portfolio

Travis Cournoyer, PhD

Tesla Project Highlight

Component, Supplier, and Process Development & Selection

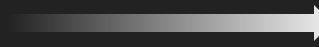
Experimental adhesives & coatings...



+



5 months



Team Size

~ 12,000 people

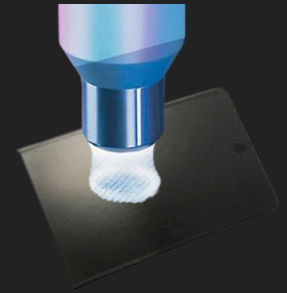


Workforce Growth (*Mild*)

...to manufacturable combination that meets cost target & takt



+



Situation – Identify & Develop winning combination

Task – Whittle Down all options through whatever means possible

Actions – Study, Formulate, Test, Co-Develop, Consolidate Lessons Learned

Result – Winning combination identified & still in use at most automotive companies today

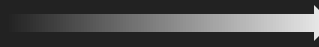
Faraday Future Project Highlight

Responsible Design Engineering of Heat Transfer Fluid for Immersion Pack

Beta prototype...



2 Years



Team Size

~ 1,500 → ~ 700 people



Workforce Shrinkage (Accelerated)

...to pre-production



Milestones

Gamma

Pre-production

Situation – Need parts designed & released

Task – RE (Fluid, adhesive, plastics, thermal barriers, filter)

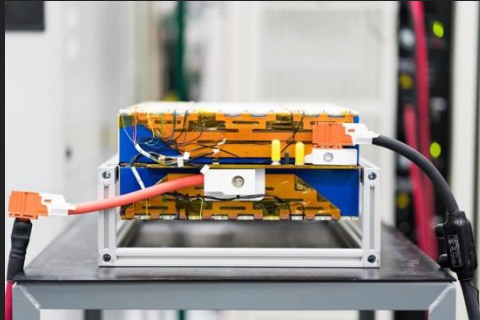
Actions – Component test, designed & released parts

Result – Parts released to production with supplier lists & quality

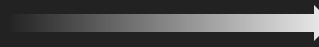
Rivian Project Highlight

Integration Engineering Lead for the R1 Founder's Edition Battery Module

Alpha prototype...



2 Years



Team Size

~ 700 → ~ 3,000 people



Workforce Growth (*Accelerated*)

...to volume production



Milestones

Beta

Factory-acceptance

Site-acceptance

Start of production

Situation – Mature the design to meet takt & quality

Task – Integration engineering & Joining RE (*Adhesives & welds*)

Actions – Release CAD & assembly drawing, close all issues

Result – On-time delivery of MFG line operating at takt & quality

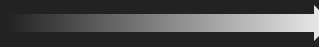
Ampaire Project Highlight

Fuel System for the Largest Hybrid-Electric Airplane that's Ever Flown

Stock aircraft arrived at HQ...



10 Months

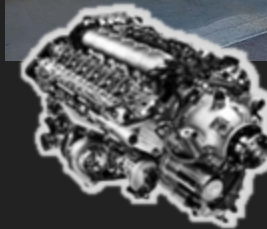


Company Size
~ 30 people
(Including contractors)



Workforce Shrinkage (*Mild*)

...Eco Caravan flew for the first time



+ Electric Motor

Situation – New Fuel distribution requirements

Task – Redesign, Rebuild & Validate the fuel system so the bird can fly

Actions – Hand-calcs, CAD, Procure, Fab, Inspect, Install, Test

Result – Fault-free first Hybrid flight on schedule (11/18/22)

Milestones

Ground Test (Engine-Only): 4 months

Ground Test (Hybrid): 6 months

First Flight (Engine-only): 9.5 months

First Flight (Hybrid): 10 months

Kyma Batteries Business Highlight

Standing up a business from scratch to first \$XX mil contracted revenue

Hired as first employee

10 Months

Company Size
1 → 7 Employees
(No contractors)



Workforce Growth (Mild)



Situation – On my second day, the founders quit & investor asked me to step in as CEO

Task – Rebuild business model, secure an HQ, hire team, build prototype, secure revenue

Actions – Stood in as CEO, CTO, COO, and CFO to grow the business

Result – 13.5 ksqft HQ in Carson CA, 7 full time staff, XX patent applications filed, a prototype built, a XX MWh / yr MFG line stood up, and secured \$XX million contracted revenue at a \$XXX,000 / mo burn rate for an annualized bottom line of ~\$X million in the first year

Travis Cournoyer Background

Early Experience & Education

2002 – 2012

Mechanic at Dad's shop (*Roger's Tires & Auto Repair*)

- Electrical work: Wired up a new sound system in '97 Jetta

2008 – 2012

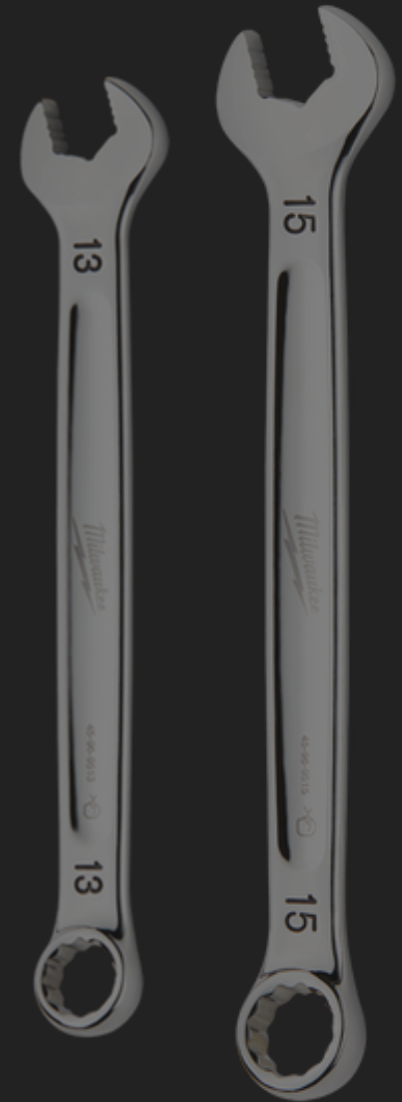
Chemistry B. S. (*Roger Williams University*)

- 2008 – 2010: Track & Field Athlete
- 2008 – 2012: Math Tutor on Campus
- 2009 – 2012: Head Math Tutor
- 2009 – 2012: Resident Assistant
- 2010 – 2012: President, Outing Club
- 2010 – 2012: Secretary, RWU American Chemical Society
- 2011 – 2012: National Communication Coordinator, Inter-Residence Hall Association

2012 – 2017

Chemistry PhD (*University of Nevada, Reno*)

- 2013 – 2014: Head Chemistry Tutor Center Tutor
- 2015 – 2016: Intern – Battery Technology (*Tesla*)
- 2016 – ... (2017): Battery Engineer (*Faraday Future*)



Travis Cournoyer Background

Career Experience (1 of 2...)

Internship



2015 - 2016

- DE Development Engineering: Testing, Formulating, Pricing & Screening Adhesives & Coatings for Use in Model 3
- GL Architecture, Construction, & Failure Analysis: Design / Build 'GigaLab' & supporting build quality

Battery Engineer



2016 – 2018

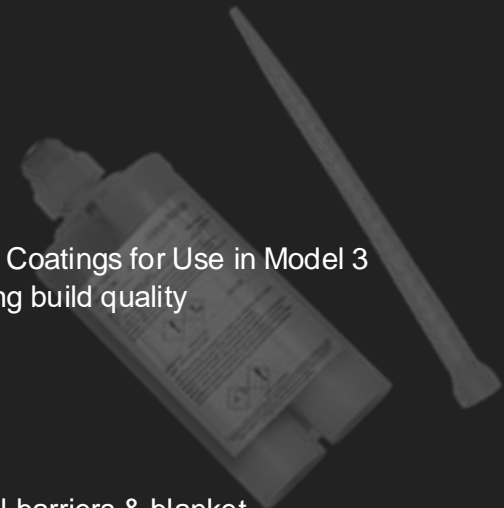
- RE Component RE: Heat transfer fluid, filter, adhesive, plastic isolation covers, thermal barriers & blanket
- RM Requirements Management: RM tool [*Jama*] company global admin & lead architect
- ERP ERP Integration: SAP Integration task force lead
- CM Configuration Management: Configuration manager for battery, powertrain, & chassis

Battery Engineer



2019 - 2021

- JG Joining RE: Battery module adhesives (x3), battery cell welds, busbar welds
- FA Failure Analysis: FMEA lead for battery pack, its subsystems, and all components within it
- IE Integration Engineering: Battery module integration lead
- SK Skunkworks: Thermal runaway mitigation skunkworks team (*5 months*)
- RLM Relational Layout Management: Relational Layout Manager in CAD for battery module & pack
- INV Inventing: Submitted 14 patent applications to the USPTO
- RCA Root Cause & Corrective Analysis: Closed 10 issues through 8D process related to battery module production ramp



Travis Cournoyer Background

Career Experience (...2 of 2)

Sr Battery Engineer



2021 - 2023

- BM Battery Module Mechanical Design: Lead effort, but with lots of support
- FS Fuel System Mechanical Design: Design, build, qualify, install, & test
- FB IPTL(Fuel & Battery): IMS, Budget, Requirements, & full ownership
- INV Inventing: Submitted >20 invention disclosures to IP counsel at Ampaire



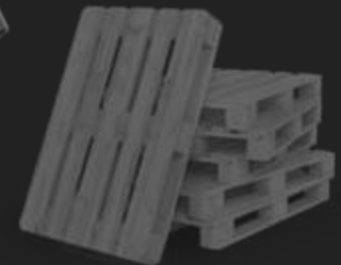
Head of Battery Engineering → CEO



Stealth Mode

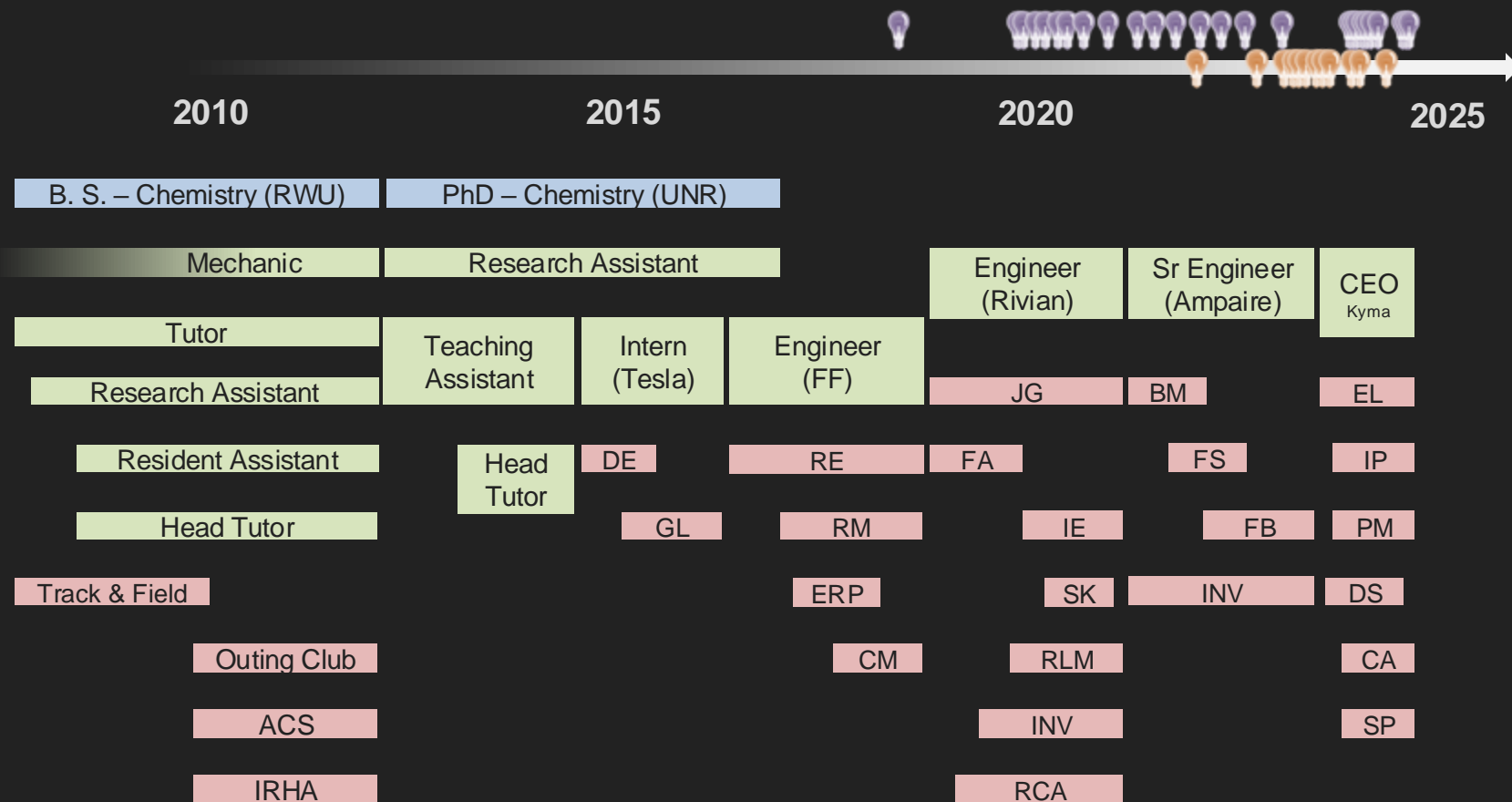
2023 – 2024

- EL Executive Leadership: CEO, CTO, CFO, COO, CBO
- IP IP Custodianship: Submitted XX patent applications, drafted 14 more
- PM Hiring & People Management: Hired & managed 6 full-time on-site staff
- DS Prototype Design & Build: Cell agnostic battery system concept
- CA Customer Acquisition: Secured \$XX million in contracted revenue
- SP Battery Supply Engagement: Contractually secured > X MWh / yr of used battery supply with > XX% SOH at ≤ \$XX/kWh




Travis Cournoyer Experience Timeline

Education, Experience, Extracurriculars / Projects, & Patents



 Submitted Application to USPTO

 Patent Issued by USPTO

Travis Cournoyer Patent Portfolio

Patent Applications & Fully Issued Patents

File Date	Publication #	Patent #	Issue Date	Patent Name	Foreign File?
2020.09.21	2022/0093991	11,476,517	2022.10.18	Temperature Gradient Control with Thermal Interface Material Variation	CN / DE / KR
2020.10.06	2022/0109131	11,594,772	2023.02.28	Battery Module and Methods of Assembly	
2020.09.21	2022/0093901	11,715,854	2023.08.01	Fastener-Free Battery Modules	CN / DE / KR
2020.08.19	2022/0059810	11,728,539	2023.08.15	Systems and Methods for Managing Adhesive Joints	
2020.07.20	2022/0016668	11,731,160	2023.08.22	Systems and Methods for Managing Sharp Transitions for Powder Coating	CN / DE
2017.12.08	2018/0358667	11,742,536	2023.08.29	Vehicle Energy-Storage Systems Having Parallel Cooling	
2020.10.26	2022/0130631	11,764,023	2023.09.19	Systems and Methods for Providing Fluid-Affected Fuses	CN / DE
2020.03.19	2021/0296719	11,837,706	2023.12.05	Adhesive Bond Setting with Pre-Cured Adhesive Standoffs	
2021.03.25	2022/0311102	11,843,130	2023.12.12	Systems and Methods of Battery Cell Module Manufacture	CN / DE / KR
2020.10.06	2022/0109132	11,967,724	2024.04.23	Battery Module Support Beam	CN / DE / KR / JP
2021.06.21	2022/0407142	11,990,594	2024.05.21	Cell Module Barrier Sheets for Thermal Propagation Resistance	CN / DE / JP
2021.09.01	2023/0060659	12,148,901	2024.11.19	Systems and Methods for Disassembling a Battery Module	
2021.12.20	2022/0416359	--	--	Directional Venting Cover for a Battery System	CN / JP / EP
2021.07.28	2023/0033505	--	--	Battery Module Thermal Isolation	CN / JP / DE

Private Portfolio as of 2024 December 9:

Not-public Patent Applications Submitted to USPTO – x14

Not-public Trade Secrets Stood Up & Generating Revenue – x2