Wolfspeed/Duke /Syracuse Partnerships

Wolfspeed | ESI | OCTOBER 28, 2024

Duke | NICHOLAS SCHOOL of the ENVIRONMENT

Syracuse University

DYNAMIC SUSTAINABILITY LAB™

INTRO – NATHAN DAIGLE, MS

Education:	MS Environmental Health & Safety
	BS Community Health
Experience:	>20 years in EHS & Sustainability
	Consulting, University, Health Care, Electric Utility Industry, Semiconductor
	Wolfspeed – 11 years

Nathan Daigle

THE BEST FOR OUR EMPLOYEES, OUR ENVIRONMENT, AND OUR COMMUNITY.

SOCIAL RESPONSIBILITY

PEOPLE FIRST, PEOPLE ALWAYS

ENVIRONMENT

PROCESSES THAT PROTECT THE ENVIRONMENT; PRODUCTS THAT IMPROVE IT

CORPORATE GOVERNANCE

ABSOLUTE COMMITMENT TO INTEGRITY AND TRANSPARENCY

ECONOMIC

RESPONSIBLE BUSINESS PRACTICES, INNOVATING FOR A BETTER FUTURE

Our Sustainability Principles

Wolfspeed

UNIVERSITY PARTNERSHIPS – *THE BUSINESS CASE*

Access to Talent

Pipeline of skilled graduates

Internship and co-op opportunities

Research and Development Collaboration

Joint research initiatives

Access to cutting-edge facilities

Curriculum Development

Tailored educational programs

Workshops and seminars

Community Engagement and Reputation

Strengthening community ties

Positive brand image

Innovation and Knowledge Transfer

Access to new ideas

Knowledge exchange

Funding and Grants

Opportunities for funding

Shared resources

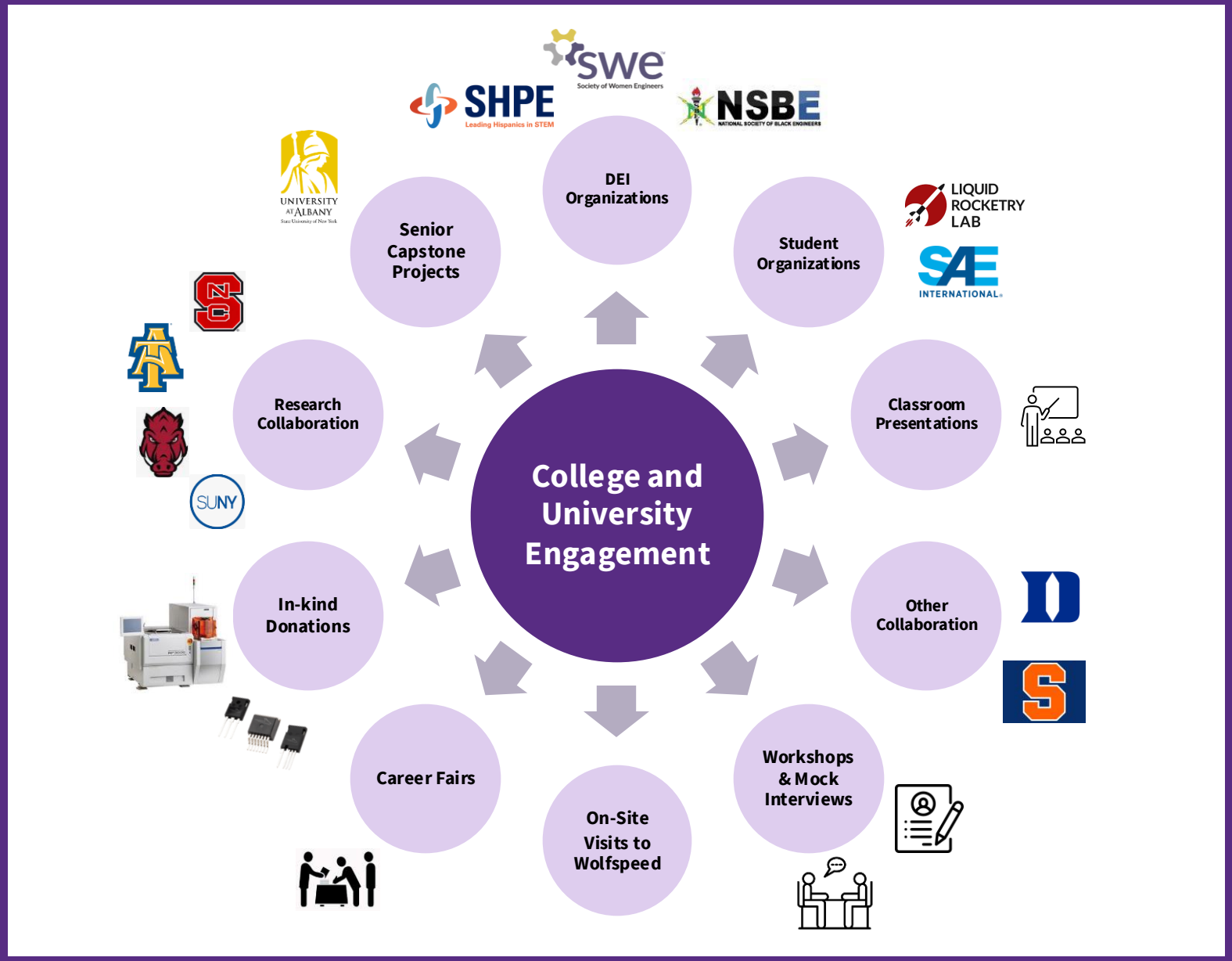
Long-Term Strategic Partnerships

Building relationships

Networking opportunities

BUILDING WOLFSPEED'S ENGAGEMENT

- Fostering results-based, collaborative relationships with community, education and government workforce development partners
- Growing an abundance of skilled talent in the pipeline – future employees who are excited to join Wolfspeed
- Increasing interest in semiconductor industry, wide-bandgap materials, and power electronics
- Focusing on Wolfspeed's high growth sites and functions



Capstone and Class Projects Project Structures

Capstone Project

2 semesters (6 months)

Students selected the project

Weekly meetings

Progress reports

Final report with deliverables

Final presentation (for school and for Wolfspeed)

Class Project

1 semester (3 months)

Professor assigned the project

Weekly meetings

Status updates

Final memo with deliverables

Final presentation (for school and for Wolfspeed)

Human Capital

Wolfspeed core team:

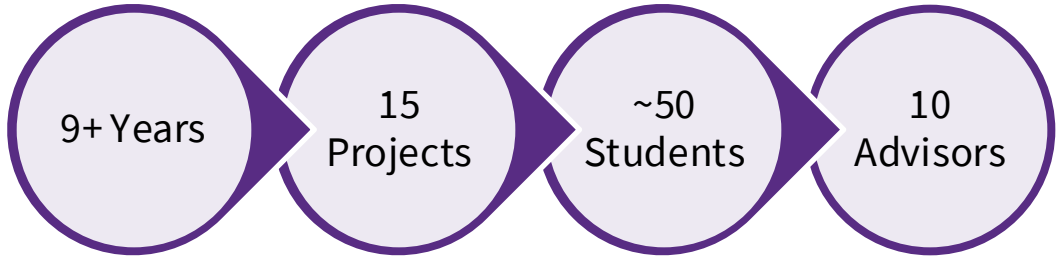
- ESG Team member
- 2+ SMEs as needed

School core team:

- 3-4 students
- Advisor
- SMEs as needed

Intentional focus to push projects and student interactions into the business.

DRIVING ESG INNOVATION AND GROWTH THROUGH UNIVERSITY PARTNERSHIPS



Dates	Project	Type	Number of Students
Fall 2015	Sustainability Benchmarking	Class Project	2
Fall 2016-Spring 2017	Materiality Assessment	Capstone Project	3
Fall 2017-Spring 2018	Scope 3 Emissions Inventory - Downstream	Capstone Project	3
Spring 2018	Sustainability GRI, Website Design	Class Project	4
Spring 2018	GHG, Water Intensity	Class Project	4
Spring 2019	CDP Reporting - Climate Change	Class Project	4
Fall 2019-Spring 2020	Scope 3 Emissions Inventory ,- Upstream	Capstone Project	3
Fall 2020-Spring 2021	Enterprise ESG Goals Development	Capstone Project	4
Spring 2021	Sustainability Frameworks – Analysis & Rec's	Class Project	3
Spring 2022	Supplier ESG Assessment Questionnaire	Class Project	4
Fall 2022	Supplier ESG Assessment Scoring Tool	Class Project	5
Fall 2022-Spring 2023	Climate Action Plan / Low Carbon Transition Plan	Capstone Project	3
Spring 2023	Materiality Assessment Update	Class Project	3
Spring 2024	Strategy for Reducing Impact of SF6	Class Project	3
Spring 2024	GHG Apportioning Model	Capstone Project	3

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Navigating the Benefits and Challenges of University Partnerships

Benefits

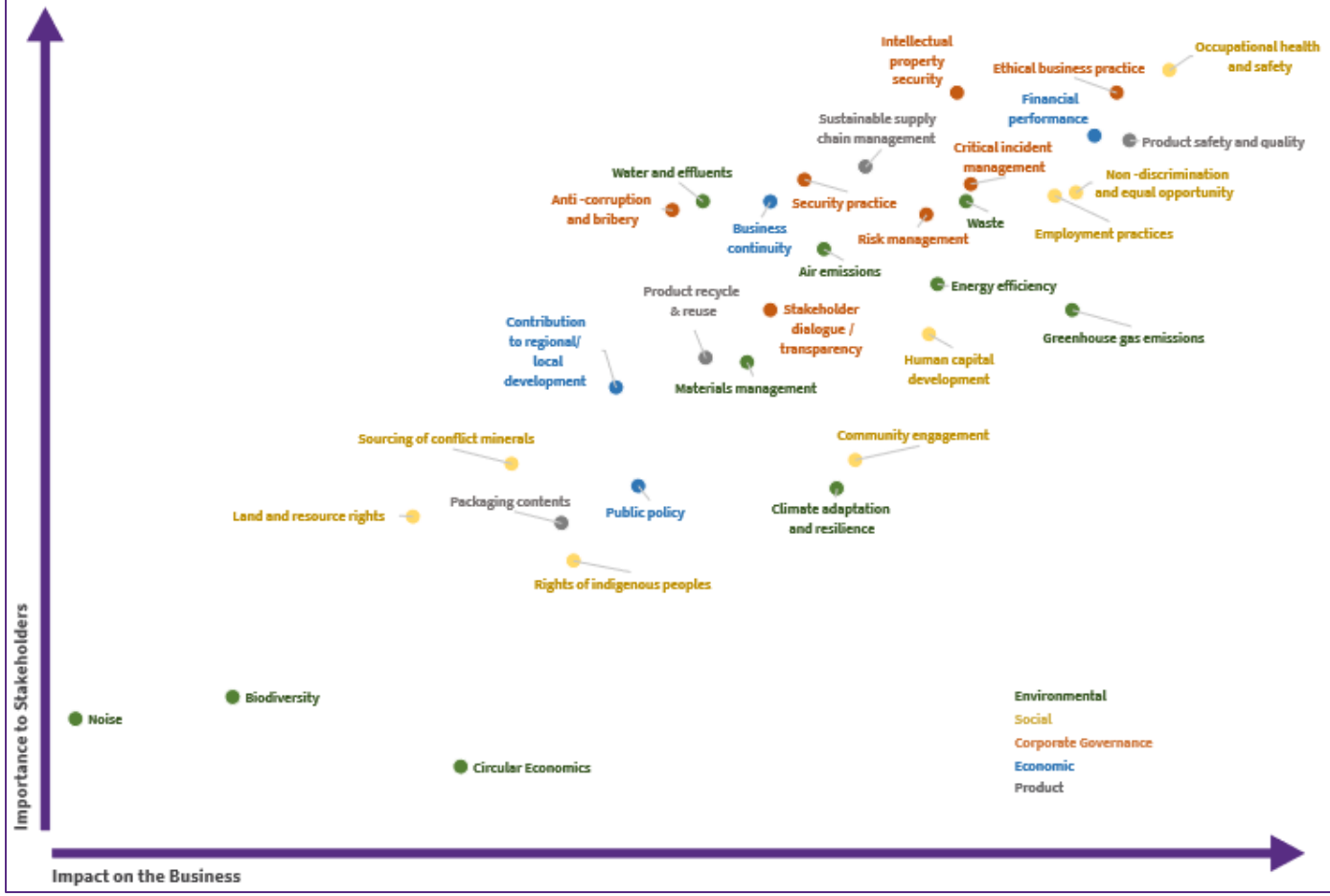
- Consulting help
- Access to Students' and Advisors' expertise and knowledge
- University resources
- Usable deliverables
- Offload of research heavy and time-consuming subjects

Challenges

- Access to proprietary data and information
- Availability of people (internal)
- Needed guidance to steer students
- Students' project management skills (sometimes ☺)

PROJECT DELIVERABLE EXAMPLES

MATERIALITY ASSESSMENT MATRIX



ENVIRONMENTAL
- Waste
- Water and effluent
- Greenhouse gas emissions

SOCIAL
- Occupational health and safety
- Non-discrimination and equal opportunity employment practices

CORPORATE GOVERNANCE
- Ethical business practice
- Intellectual property security (cyber and data security)
- Security practice
- Critical incident management

ECONOMIC
- Financial performance
- Business continuity

PRODUCT
- Strengthening product safety and quality
- Sustainable supply chain management

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CLIMATE ACTION PLAN

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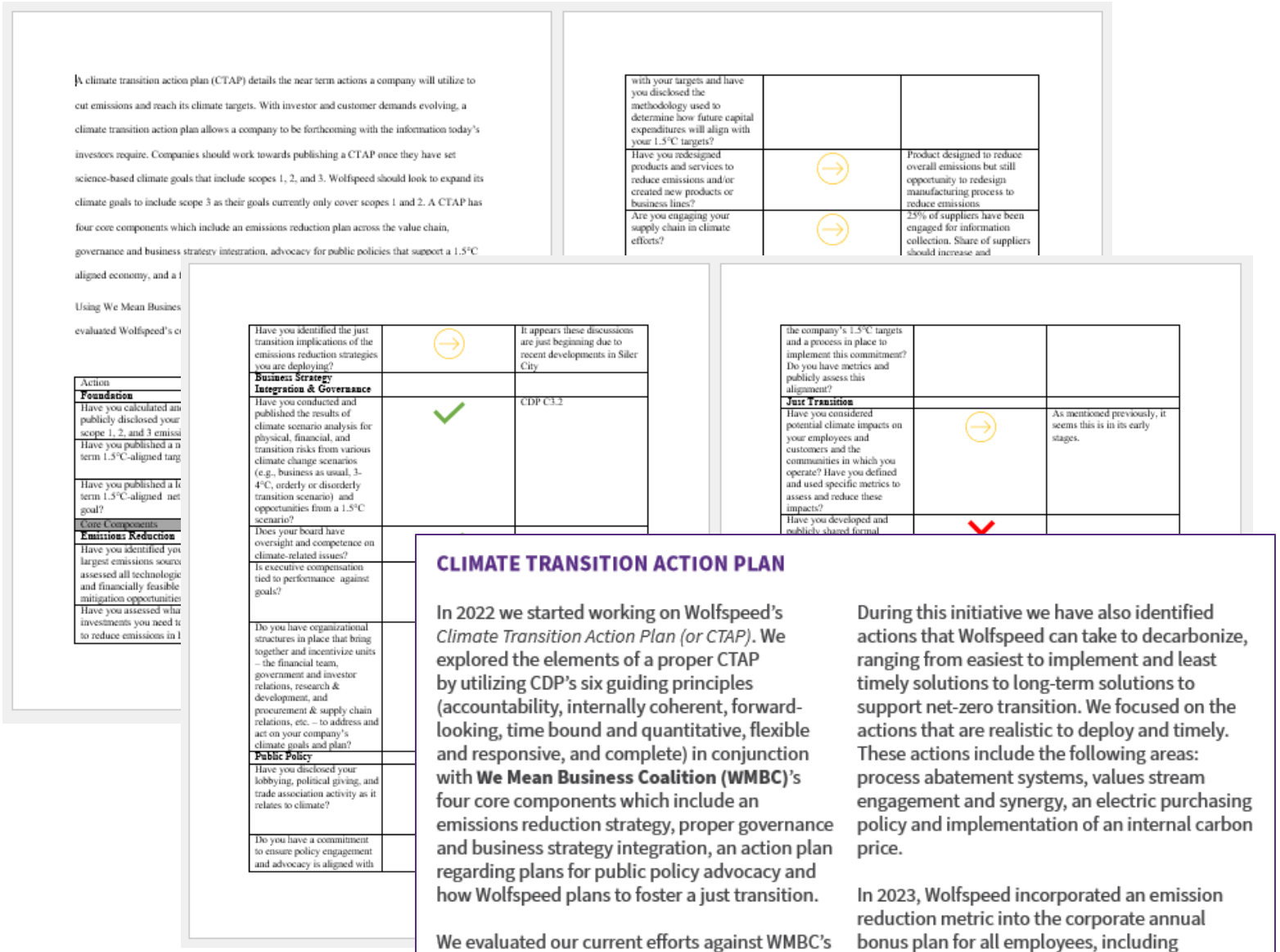

A climate transition action plan (CTAP) details the near term actions a company will utilize to cut emissions and reach its climate targets. With investor and customer demands evolving, a climate transition action plan allows a company to be forthcoming with the information today's investors require. Companies should work towards publishing a CTAP once they have set science-based climate goals that include scopes 1, 2, and 3. Wolfspeed should look to expand its climate goals to include scope 3 as their goals currently only cover scopes 1 and 2. A CTAP has four core components which include an emissions reduction plan across the value chain, governance and business strategy integration, advocacy for public policies that support a 1.5°C aligned economy, and a

Using We Mean Busines

evaluated Wolfspeed's c

Action
Foundation
Have you calculated an publicly disclosed your scope 1, 2, and 3 emissi
Have you published a n term 1.5°C-aligned targ
Have you published a l term 1.5°C-aligned net goal?
Core Components
Emissions Reduction
Have you identified you largest emissions source assessed all technologic and financially feasible mitigation opportunities
Have you assessed wha investments you need t to reduce emissions in

with your targets and have you disclosed the methodology used to determine how future capital expenditures will align with your 1.5°C targets?		
Have you redesigned products and services to reduce emissions and/or created new products or business lines?	→	Product designed to reduce overall emissions but still opportunity to redesign manufacturing process to reduce emissions
Are you engaging your supply chain in climate efforts?	→	25% of suppliers have been engaged for information collection. Share of suppliers should increase and

Have you identified the just transition implications of the emissions reduction strategies you are deploying?	→	It appears these discussions are just beginning due to recent developments in Siler City
Business Strategy Integration & Governance		
Have you conducted and published the results of climate scenario analysis for physical, financial, and transition risks from various climate change scenarios (e.g., business as usual, 3-4°C, orderly or disorderly transition scenario) and opportunities from a 1.5°C scenario?	✓	CDP C3.2
Does your board have oversight and competence on climate-related issues?		
Is executive compensation tied to performance against goals?		
Do you have organizational structures in place that bring together and incentivize units – the financial team, government and investor relations, research & development, and procurement & supply chain relations, etc. – to address and act on your company's climate goals and plan?		
Public Policy		
Have you disclosed your lobbying, political giving, and trade association activity as it relates to climate?		
Do you have a commitment to ensure policy engagement and advocacy is aligned with		

the company's 1.5°C targets and a process in place to implement this commitment? Do you have metrics and publicly assess this alignment?		
Just Transition		
Have you considered potential climate impacts on your employees and customers and the communities in which you operate? Have you defined and used specific metrics to assess and reduce these impacts?	→	As mentioned previously, it seems this is in its early stages.
Have you developed and publicly shared formal	✓	

CLIMATE TRANSITION ACTION PLAN

In 2022 we started working on Wolfspeed's *Climate Transition Action Plan (or CTAP)*. We explored the elements of a proper CTAP by utilizing CDP's six guiding principles (accountability, internally coherent, forward-looking, time bound and quantitative, flexible and responsive, and complete) in conjunction with **We Mean Business Coalition (WMBC)**'s four core components which include an emissions reduction strategy, proper governance and business strategy integration, an action plan regarding plans for public policy advocacy and how Wolfspeed plans to foster a just transition.

We evaluated our current efforts against WMBC's guidance and learned our strengths (e.g., calculated GHG inventory, largest emissions sources identification, climate-related oversight) and areas where we need improvement (e.g., inclusion of scope 3 in our emission reduction targets, financial evaluation, public policy engagement and advocacy).

During this initiative we have also identified actions that Wolfspeed can take to decarbonize, ranging from easiest to implement and least timely solutions to long-term solutions to support net-zero transition. We focused on the actions that are realistic to deploy and timely. These actions include the following areas: process abatement systems, values stream engagement and synergy, an electric purchasing policy and implementation of an internal carbon price.

In 2023, Wolfspeed incorporated an emission reduction metric into the corporate annual bonus plan for all employees, including executives. The metric has material significance and creates long-term sustainable value for Wolfspeed and key stakeholders. This action reflects our focus on improving the maturity of our environmental sustainability program and driving our emissions reductions performance via tying it with our compensation program.

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GHG APPORTIONING MODEL

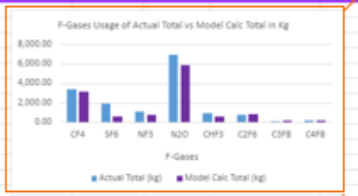
SCD Summary Sheet After

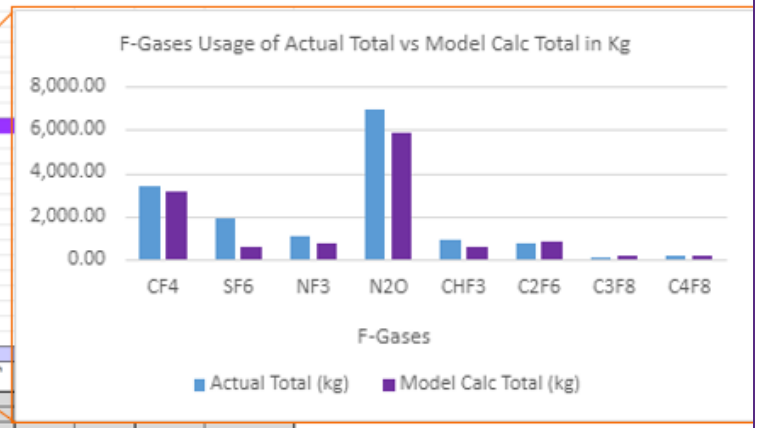
Apportionment Model Enhancements

GHG Scope - 1 Apportionment Model

with Dep category calculated separately and EH&S values from oracle pulls assumed as estimated values only

	Actual Total (kg)	Model Calc Total (kg)	Total Volume (kg) Etch	Dep	Clean	Apportioning % Etch%	Dep%	Clean%	%error	%difference
CF4	3,431.96	3160	47.47	0	3113	2%	0%	98%	8.60%	8.25%
SF6	1,880.94	633	633	0	0	100%	0%	0%	197.10%	99.27%
NF3	1074.22	749	749	0	0	100%	0%	0%	43.41%	35.67%
N2O	6,903.32	5886	1804	4082	0	31%	69%	0%	17.29%	15.91%
CHF3	957.20	590	590	0	0	100%	0%	0%	62.24%	47.47%
C2F6	750.68	843	0	0	843	0%	0%	100%	10.98%	11.62%
C3F8	47.63	156	0	0	156	0%	0%	100%	69.52%	106.57%
C4F8	171.91	153.03	153.03	0	0	100%	0%	0%	12.34%	11.62%





Std. Liters Tool Set	CF4 total	CF4 Dielectric / Polymer / Semiconductor Etch	CF4 Chamber Clean	SF6 total	SF6 Dielectric / Polymer / Semiconductor Etch	SF6 CVD Chamber Clean	NF3 total	NF3 Dielectric / Polymer / Semiconductor Etch	N2O total	N2O Dielectric / Polymer / Semiconductor Etch	N2O Dielectric Deposition	N2O Chamber Clean	CHF3 total	CHF3 Dielectric / Polymer / Semiconductor Etch	C2F6 total	C2F6 Chamber Clean	C3F8 total	C3F8 Chamber Clean	C4F8 total	C4F8 Dielectric / Polymer / Semiconductor Etch
ICP+ViaEtch				97,150.38	97,150.38															
Matrix Bobcat	24,946.83	8,006.83	16,940.00																	
790RIE							3,638.60	3,638.60	0.00	0.00		0.00	0.00	0.00						
P5000RIE	0.00	0.00		0.00	0.00		232,846.79	232,846.79	916,097.50	916,097.50			188,891.38	188,891.38						
P5000CVD	775,514.49		775,514.49						2,073,426.32		2,073,426.32	0.00								
Versalis																	18,631.15	18,631.15		
ICE+Centura	4,078.60	4,078.60		9.14	9.14														17,148.60	17,148.60
Novellus															136,966.27	136,966.27				
Total	**804,539.91**	**8,006.83**	**792,454.49**	**97,159.52**	**97,159.52**	**0.00**	**236,485.39**	**236,485.39**	**2,989,523.82**	**916,097.50**	**2,073,426.32**	**0.00**	**188,891.38**	**188,891.38**	**136,966.27**	**136,966.27**	**18,631.15**	**18,631.15**	**17,148.60**	**17,148.60**
	22.42 L/mol STP																			
	88.04 g/mol CF4			146.06 g/mol SF6			71.00 g/mol NF3		44.13 g/mol N2O				70.01 g/mol CHF3		138.01 g/mol C2F6		188.02		200.03 g/molC4F8	

Calc (kg) Tool Set	CF4 total	CF4 Dielectric / Polymer / Semiconductor Etch	CF4 Chamber Clean	SF6 total	SF6 Dielectric / Polymer / Semiconductor Etch	SF6 CVD Chamber Clean	NF3 total	NF3 Dielectric / Polymer / Semiconductor Etch	N2O total	N2O Dielectric / Polymer / Semiconductor Etch	N2O Dielectric Deposition	N2O Chamber Clean	CHF3 total	CHF3 Dielectric / Polymer / Semiconductor Etch	C2F6 total	C2F6 Chamber Clean	C3F8 total	C3F8 Chamber Clean	C4F8 total	C4F8 Dielectric / Polymer / Semiconductor Etch
ICP+ViaEtch				633.05	633.05															
Matrix Bobcat	97.99	31.45	66.54																	
790RIE							11.53	11.53	0.00	0.00		0.00	0.00	0.00						
P5000RIE	0.00	0.00		0.00	0.00		737.55	737.55	1,803.59	1,803.59			589.97	589.97						
P5000CVD	3,046.11		3,046.11	-					4,082.10		4,082.10	0.00								
Versalis																	156.28	156.28		
ICE+Centura	16.02	16.02		0.06	0.06														153.03	153.03
Novellus															843.31	843.31				
Total	**3,160.12**	**47.47**	**3,112.65**	**633.11**	**633.11**	**0.00**	**749.07**	**749.07**	**5,885.69**	**1,803.59**	**4,082.10**	**0.00**	**589.97**	**589.97**	**843.31**	**843.31**	**156.28**	**156.28**	**153.03**	**153.03**
Ratio		2%	98%		100%	0%		100%		31%	69%	0%		100%		100%		100%		100%

Actual (kg)	3,431.96			1,880.94			1074.22		6,903.32				957.20		750.68		47.63		171.91	
% Difference	8.25%			99.27%			35.67%		15.91%				47.47%		11.62%		106.57%		11.62%	
% error	8.60%			197.10%			43.41%		17.29%				62.24%		10.98%		69.52%		12.34%	

DYNAMIC SUSTAINABILITY LAB™

SHARING EXPERIENCE & LESSONS LEARNED

Low or no costs to Wolfspeed	Time = $$$
NDA required, sign by students, professors, and/or university	Don't underestimate the time this can take
Need to submit "**appealing" project proposals**	Students pick in some cases…helps to be "cool" and "current" and "relevant"
Wolfspeed has **contacts** at both universities	Keep in touch with them! Even outside of project scope…you never know…
In general, **two projects per year**	Internal resource allocation considerations. Don't bite off more than you can support for a *QUALITY* student experience
Two-way partnership	Remember that both sides are supposed to benefit from these engagements ☺

THANK YOU