

SWOT Survey Results for:



FLORIDA SOLAR ENERGY CENTER®
Creating Energy Independence

STRENGTHS – capabilities and resources INTERNAL to the organization:

#	STRENGTH DESCRIPTION	CATEGORY
S1	Research	R&D
S2	DOE is our customer.	Sales & Marketing
S3	Energy Efficient Buildings	Operations Mgmt.
S4	Electric Vehicle and Fuel Cell Vehicle Research excellence shown by major funding by DOT and DOE	R&D
S5	Continuing Education and K-12 education leadership in Solar, Energy Efficient Buildings and Electric Vehicles	Services Offered
S6	Strong program in PV applications and PV manufacturing partnership with Industry	Services Offered
S7	All energy research at FSEC is interdisciplinary and research readily collaborates with other faculty and industry	R&D
S8	Excellent leadership and support staff. Jim Fenton, et al. UCF umbrella John Hitt and Board. Industry representation on board. FPL, Duke, etc.	General Management
S9	Excellent reputation amongst labs, universities.	R&D
S10	Facilities.	Operations Mgmt.
S11	Track record. (of research?)	R&D
S12	Staff capabilities	Human Resources
S13	The top energy conservation renewable testing laboratories in the State of Florida.	Services Offered
S14	Provides training classes on a variety of energy-related such as energy conservation to renewable energy installations,	Services Offered
S15	A vast library of energy research that provides information to Homeowners and Businesses.	R&D
S16	Reputation: FSEC is well known in the state and nationwide as a premiere center in the area of energy efficiency and renewable energy.	R&D
S17	Technical Expertise: FSEC has advanced facilities and analytical staff.	R&D
S18	Support: UCF provides vast resources in the form of facilities and expertise that help expand FSEC's scope.	Operations Mgmt.
S19	Education - FSEC is well known in this area and continues to progress.	Services Offered
S20	Good facilities.	Operations Mgmt.
S21	Strong applications perspective-- we blend R&D with industry experience, methods and needs.	Services Offered
S22	We have knowledgeable, capable research and support staff.	R&D
S23	We have \$3 million in annual funding from the university plus overhead funds.	Donations
S24	We are well-known for real-world research activities, e.g., field studies and data monitoring, simulation and analysis of system performance.	R&D
S25	Strong technical staff for present programs.	R&D
S26	Strong proposal preparation skills.	Operations Mgmt.

#	STRENGTH DESCRIPTION	CATEGORY
S27	Strong computer support.	Information Systems
S28	Strong building's area program.	?
S29	Developing strong electric vehicle program.	R&D
S30	Close to 40 years of successful operation and R&D history	R&D
S31	Recognition among federal & state funding agencies for high quality R&D.	R&D
S32	Outstanding and modern analytical and applied research labs and field facilities that conform to code requirements.	Services Offered
S33	Experienced in-house support personnel and resources, i.e. graphics, computer services, web work, design, machine shop, etc.	Operations Mgmt.
S34	Outstanding & active public information and outreach office.	Sales & Marketing
S35	Research top in the nation among Universities	R&D
S36	Testing	Services Offered
S37	Public Education	Services Offered
S38	K-12 Programs	Services Offered
S39	Political Connections	General Management
S40	Strong support from UCF leadership, VP and above	General Management
S41	Legacy in solar.	R&D
S42	Excellent technical teams.	R&D
S43	Significant "Brain Trust" in solar.	R&D
S44	Excellent Education outreach (FL)	Services Offered
S45	Caribbean and Latin Am recognition for training of solar best practices.	Services Offered
S46	Strong consumer protection culture -- beginning as a test quality center for solar water heating, FSEC maintains the neutral view of a not for profit with no	Services Offered
S47	Good outreach activities	Sales & Marketing
S48	History of teamwork within FSEC Alternative energy and efficiency are critical to the state and the nation...not a short term topic among the highest E&G support of any UCF CENTERS.	Operations Mgmt.
S49	The brand FLORIDA SOLAR ENERGY CENTER one of the oldest most respected solar research entities in the world. These guys built solar homes in Lakeland before anyone thought solar was viable. The brand is a very strong one.	Sales & Marketing
S50	The scientists that give FSEC the research expertise to discover the facts and the wealth of knowledge they have to share. Had it not been for these scientists and what they had to share, many companies would have given up on solar energy a long time ago. With their help we didn't spend time, money and energy going down dead ends. They kept us on the proven path which ensured our success.	Operations Mgmt.
S51	The time for solar is NOW. The fact that FSEC is long established gives us a big head start.	Sales & Marketing
S52	Technical capability / staff	Operations Mgmt.
S53	Facility capability	Operations Mgmt.
S54	Adaptability as new opportunities come along – vehicles.	R&D
S55	Adaptability – national interests and politics change and influence this direction.	R&D

#	STRENGTH DESCRIPTION	CATEGORY
S56	Funding – FSEC receives twice as much as the Space Institute. Solid base of funding to start off with. Very few requirements of what to do with funding other than to do Research.	Funding
S57	Reputation – the name is trusted due to certifications	R&D
S58	Flexibility – we have done projects outside of the traditional applications	R&D

WEAKNESSES – limitations in terms of capabilities and resources INTERNAL to the organization:

#	WEAKNESS DESCRIPTION	CATEGORY
W1	Outreach to other state universities	Sales & Marketing
W2	Our title indicates we are an advisory board, yet I am not confident that I know what our problems are. It seems we have a funding problem but we never put that on the agenda. Let's get our challenges identified and then put them one by one to the board for suggestions.	General Management
W3	Changing energy research landscape of Department of Energy (Budget cuts and move from University support to National Labs and more industry funded demonstrations projects).	Donations/Funding
W4	State funding for Energy research is minimal while more than 20 other states have large funded industry university collaborative funding.	Donations/Funding
W5	State budget cuts over last seven years and no new positions foreseeable in next several years.	Donations/Funding
W6	Oil prices at this time make solar energy economically unattractive.	Products/Services
W7	John Hitt's representative on the board, (M.J) will remind the group about the umbrella.	?
W8	FSEC in the, "Sun Shine State", is not marketed properly.	Sales & Marketing
W9	Limited industry (commercial) reputation and participation (outside FL, SE). FSEC viewed as not relevant. Slow to deliver testing services.	Sales & Marketing
W10	I do not know the internal workings of FSEC to know what weaknesses there actually are. However, I'm sure that limited budgets would mean not being able to hire the enough resources to expand proposal writing and research.	Donations/Funding
W11	Reputation: This was a strength as well but FSEC is also known for being expensive to work with.	Operations Mgmt.
W12	Focus: Generally, FSEC has many different focuses that doesn't always get relayed to outside entities.	Sales & Marketing
W13	Lack of strong, single PI culture.	General Management
W14	Few if any dominant faculty on the national stage.	R&D
W15	Distance and culture makes integration with the rest of the university problematic.	General Management
W16	Work ethic seems that of a small government lab rather that a team of academics set on dominating their disciplines.	General Management
W17	Seems a bit confused about what it wants to be.	General Management
W18	Lack of strategic vision -- we seem to bounce from one funding opportunity to the next; (hydrogen, PV, electric cars, smart grid, fuel cells, batteries etc.)	General Management
W19	Low morale -- professionals feel expendable and unable to plan;	General Management

#	WEAKNESS DESCRIPTION	CATEGORY
	support staff does not see con't	
W20	We aren't strongly known by our peers and funding agencies as being at the forefront of any renewable energy technologies other than buildings energy systems.	Sales & Marketing
W21	We don't have a process to identify funding agencies' needs significantly in advance of getting the funding opportunity announcements.	General Management
W22	We need to rebuild relationships with DOE Program Managers and FL Energy Office staff and understand their needs before promoting our ideas.	General Management
W23	We don't have an internal process to periodically routinely evaluate priorities for investing our internal resources.	Operations Mgmt.
W24	We don't have a process to train research staff in new technologies, to encourage exploratory investigations, or otherwise engage in longer-term, higher-risk activities. This could include: create mentor-partner relationships with internal external experts in the new research area; research staff assignments to actively participate in working committees subcommittees (e.g., in standards-development organizations) on new related technical issues; establish a culture that encourages thoughtful risk-taking to expand our capabilities, skills and knowledge.	General Management
W25	Technical staff in areas other than present programs.	General Management
W26	Lack of presence in Washington funding agencies.	Sales & Marketing
W27	Lack of Washington related program.	Sales & Marketing
W28	Lack of direct educational efforts causes lack of UCF educational resources.	Sales & Marketing
W29	Development of new programs.	R&D
W30	Not being on UCF campus has begun to hurt FSEC in that makes collaboration with UCF faculty and use of UCF facilities more difficult. Furthermore, it hinders FSEC faculty members' ability to teach on campus and as such provide some stability (financially) to their research endeavors. Also, it makes effective utilization of UCF GRAs more difficult.	General Management
W31	FSEC business model is no longer viable in Florida. This so because of continuous downward movement of federal funding in the areas that traditionally FSEC operated.	Donations/Funding
W32	FSEC's operational budget (E&G dollars) is grossly inadequate for its mission and has been declining over the years.	Donations/Funding
W33	FSEC has lost good number of experienced scientists and engineers in the past few years due to budget shortfall.	Donations/Funding
W34	We need to expand our customer base and become less dependent on government funds.	Sales & Marketing
W35	Cooperative programs with industry (lack of?)	Sales & Marketing
W36	FSEC could be a catalyst for statewide solar cooperation and coordination.	Sales & Marketing
W37	FSEC payroll used to be \$10 M, now at \$8M and with decreasing external funding will have to go to \$7M soon. Layoffs have already hurt morale.	Donations/Funding

#	WEAKNESS DESCRIPTION	CATEGORY
W38	We have no strategic plan.	Lack of Strategic Plan
W39	Florida, unlike California and other forward-looking states has no public benefit funds to support energy research.	Donations/Funding
W40	We have only one source of funding that is subject to political influence.	Donations/Funding
W41	The lack of a well published mission statement or a well published set of goals.	Lack of Strategic Plan
W42	The lack of a sales and marketing staff	Sales & Marketing
W43	We have to make payroll and pay the bills. But the FSEC is focusing on the things that they can get funding for today, but this may not be the strategic direction for where this center needs to go. Might be allocating resources to things that may not be viable tomorrow.	Lack of Strategic Plan
W44	Perhaps a limitation is that “we just do solar” - the brand could be a constraint when we do many more things than just solar. AHA. Other people may not know this based on our brand name...we may need this brand awareness to get the funding. <ul style="list-style-type: none"> • FSEC – trying to drop the word Solar • Have to get to the customers to know why they come to FSEC 	Sales & Marketing
W45	Common internal consensus definition FSEC’s customer? It’s either the Federal Government or the State Government. The best success this center has had has been under the gentleman who wasn’t focused on solar at all. Who is the customer today? There are more competitors in the market place. One of the best programs we had was manufactured housing and ran this for a long time.	Sales & Marketing
W46	We meet for only 3 hours twice per year. We get a presentation and there is very little time to get our opinions. Perhaps not enough meeting time – meet more often to make a better contribution. There’s a danger – we don’t want to micromanage FSEC. We don’t want to get involved in operations. Internal communication with the Advisory Board. <ol style="list-style-type: none"> Are we using the board for the advantage of the Center properly? This would help with awareness. Everyone in here has separate contacts, utilities, policies, and different layers of society that we deal with. 	General Management
W47	The onboarding of board members isn’t clear. Meet so infrequently so there are large gaps for a new person.	General Management

OPPORTUNITIES – areas in the target market to grow results EXTERNAL to the organization:

#	OPPORTUNITY DESCRIPTION	CATEGORY
O1	Coordinate statewide research and testing of distributed generation production profiles leadership in EV and Smart Grid development in FL	Political or Competition
O2	THE Florida Solar Energy Center! Now that is an old well known respected brand. And it is prime time for that brand. With all that is going on in solar it is hard to keep up even for an advocate like me. The brand the history of the brand is what we have to sell. The FSEC seal of	Sales & Marketing

#	OPPORTUNITY DESCRIPTION	CATEGORY
	approval would be a big advantage for any product. Let's become or at least try to become THE testing and approval center of all things solar. Get the manufactures to pay for our testing of their claims so they can site that testing in there adds. Our brand grows and income improves.	
O3	Price of Solar and Energy Storage almost at Grid Parity. Utilities Industry and FSEC will have more opportunities to work together to ensure stability of grid, fueling vehicles with made in Florida energy and lower overall cost for electricity and transportation fuel.	Economic
O4	Partnering with Military Bases in Florida in particular Air Force Bases and Communities near Pensacola that were impacted by the BP oil spill.	Buyers
O5	The DOT funded EV Transportation Center increases the ability to work with the FL DOT (new source of funding) and many new industrial partners.	Competition
O6	Additional faculty positions in STEM areas on Main Campus my work with FSEC more	Suppliers (talent)
O7	UCF Downtown Campus and New Advanced Manufacturing Center (UCF involved http://www.icamr.net). This require better relationships between FSEC and UCF facilities	New Entrant
O8	There are 67 Counties in the State. FSEC should be involved with programs in each County. The Speaker of the House in Tallahassee is a UCF graduate. He is elected in Brevard County. The Brevard Legislative Delegation is Dec. 18. Not an agenda item? Senator Thad Altman is Chairman of the Delegation. I have heard that, "all politics is local." We must begin to realize that Florida is the Sun Shine state where every structure should have a solar energy component. It works in other parts of the world and can happen here.	Buyers
O9	Provide certification (nationally), component, system performance verification to financing entities, and developer procurement specifiers.	Buyers
O10	Be a Consumers Report Service, A JD Powers like rating service for components, systems, services for DG. Energy storage, testing, certification, training, best practices for installers.	Buyers
O11	Expand Latin American presence.	Buyers
O12	Provide educational understanding to industry, developers, and communities of various financing options for DG.	Buyers
O13	More training, testing and research papers to document good energy conservation techniques for homeowners and businesses in the State of Florida.	Buyers
O14	Provide energy-conservation renewable testing to Large Florida Companies on a fee-basis. Be the technical resource on energy-related activity for these companies.	Buyers
O15	111D - the EPA regulations for power plants will likely include energy efficiency measures.	Political
O16	Utility Scale Solar - FSEC could provide research and consultation.	Buyers
O17	Electric Vehicles - Charging, infrastructure, regulatory research and recommendations, etc.	Political
O18	Policy: FSEC could provide objective policy recommendations through	Political

#	OPPORTUNITY DESCRIPTION	CATEGORY
	the research that is conducted.	
O19	Diversify funding sources	Suppliers/Funding
O20	Training and support of code officials - transition from being a certification (quasi-regulatory) body to providing independent, non-profit technical perspective to others.	Buyers
O21	Consulting to other state agencies, local governments, utilities.	Buyers
O22	We have started establishing researcher-to-researcher relationships with other UCF faculty allowing true collaboration to increase our capabilities.	Competition / Suppliers
O23	Current DOE-funded programs seem to be largely systems-based (as opposed to component-level research), which is, generally-speaking, our forte.	Buyers
O24	The DOE State Energy Program still exists (\$5 M awarded in 2014) although nothing was awarded to FL.	Suppliers/Funding
O25	Need program dedicated to funding opportunities. Washington presence needed as mentioned above.	Suppliers
O26	Building upon present programs -- buildings and electric vehicles programs as examples.	Buyers
O27	Teaming with UCF business development on cooperative efforts.	Buyers
O28	Aggressive licensing of FSEC's IP portfolio. Unfortunately, this is controlled by UCF's OR&C which has a poor record of accomplishing this.	Buyers
O29	Spin off an entity that can operate like a business -- FSEC Corporation that will go after federal dollars that normally go to private companies, e.g., SBIR, STTR, ATP, ARPA-E, etc.	New Entrant (create it)
O30	Leadership in solar policy development in FL	Buyers
O31	Restructure from a few program generators to more hungry hunter gathers	Buyers
O32	Put some real structure and accomplishments around electrical cars	Buyers
O33	Focus on making solar robust enough not to require government subsidies	Technology
O34	Put arms around all UCF energy related activities in order to find more internal partners	Buyers
O35	The time for solar is NOW. Not in the next ten years, the time is NOW. FSEC has a strong brand. We market that brand and the abilities that created the brand to mankind's betterment. Or we can do nothing and become a historic footnote. Man's greatest discovery may have been fire but it is time we move on. Combustion is not the path of even the near future. Solar is the path to job growth, a better environment, the underfunding of terrorist, and the return of dominance for United States industry. Solar is the path to a better world. And FSEC and UCF are uniquely positioned provide the answers to the questions that will arise.	Sales & Marketing
O36	What we can sell are answers. Some of those answers are not yet known. Most of the questions are yet to be asked. But our expertise, our Brand, is in the ability to do the necessary research to get the	Sales & Marketing

#	OPPORTUNITY DESCRIPTION	CATEGORY
	answers. Scientific answers for FSEC and a wide range of other answers for UCF.	
O37	What if FSEC, UCF or both approached FPL and said we think it possible for you to install roof top solar for less than the cost of a new power plant. Would you like us to research that for you? Great what would that answer be worth?	Sales & Marketing
O38	There is a law that things have to be FSEC approved but there are no teeth to support it.	Political
O39	Hospitals have a requirement that they have to have an emergency generator. Solar cells on the roof should be a viable alternative.	Buyers
O40	Solar cells with schools as a viable alternative.	Buyers
O41	Fire and police department – S Orlando Avenue	Buyers
O42	If products have to be certified through FSEC. Testimonials can often be more weight than a certification though. But FSEC isn't going to do it for free...so they'll have to spend money.	Buyers
O43	Other opportunities to monetize FSEC – builders, consulting services.	Buyers
O44	Diversify funding sources. Don't just focus on DoE. Including Industry. Increase the reach that we currently have to penetrate more counties. Every structure in the State of Florida should have solar energy. Opportunity penetration.	Suppliers

THREATS – potential losses within the target market EXTERNAL to the organization:

#	THREAT DESCRIPTION	CATEGORY
T1	It's not clear what the state will do with support for solar, since the legislature seems to be on an education budget cutting binge, i.e., bright futures scholarships. Will they be raiding other trust funds to support tax cuts?	Political
T2	Relying on government funding is a fatal flaw. Increasingly our elected representatives are elected because of campaign spending and are influenced by the donors of that money. The existing energy players have and will continue their donations in an effort to protect their business positions. They have piles of money.	Supplier/Funding
T3	Universities in other states receiving support to grow their energy programs from their states. California as a state provides more R&D to CA universities than Federal sources.	Supplier/Funding
T4	Excellent faculty at FSEC and at main campus continues to leave for greener pastures	Supplier/Talent
T5	DOE funding in many core areas to FSEC dries up.	Supplier/Funding
T6	Oil cartels, OPEC, domestic fossil fuel production, that lead to oil glut and lower prices. This in turn makes solar economically unattractive. Domestic oil is subsidized by federal government since WW1. Solar energy must receive equal support. China and other world powers subsidize industry and American business can't compete in the market place.	Economic / Political
T7	Competition from other centers like NC Clean Energy Technology Center	Competition

#	THREAT DESCRIPTION	CATEGORY
	Competition from entities like Black and Veatch. Already have third party verification of module mfg. ratings.	
T8	Lower cost services from local testing entities.	Competition
T9	The only threat that I can see is reducing funding which would result in jobs at FSEC.	Supplier/Funding
T10	Other Energy Not-for-profits - The field of energy seems to have more and more folks with their own association or non-profit. The more there are the fewer funds to go around and less focus as well.	Competition
T11	Legislation - I'm not aware of anything specific at this time but it is something to watch as session draws near.	Political
T12	Weak leverage of C&G could result in reprogramming those funds to more productive areas of research others in Florida taking leadership, even FL Gulf Coast!	Political?
T13	The falling price of PV -- as PV became suddenly feasible, every university, lab and consultant in the country started bidding on FOAs. These are often high quality proposals that make the selection process more of "your turn" than the few good proposal	Economic
T14	Other states' political climate regarding energy creates more incentives for research organizations universities to be proactive and creative in solving energy-related issues.	Competition
T15	Change in funding mechanisms at U.S. DOE. More \$ to industry, less to universities.	Supplier/Funding
T16	Competition from national labs.	Competition
T17	R & D no longer being a priority of U.S. DOE.	Political
T18	No university programs in U.S. DOE.	Political
T19	Opportunities for hiring new staff in critical areas	Supplier / Talent
T20	Continued downward trend in the federal R&D funding for renewable energy	Supplier/Funding
T21	Lack of support and appreciation for renewable energy R&D in part of Florida legislators and policy makers.	Political
T22	DOE labs	Competition
T23	Is Florida's attitude towards energy and energy efficiency a real problem to FSEC's work or just a mind-set that prevents us from taking initiative?	Political
T24	Government funding as our only income.	Supplier/Funding
T25	Political pressure funded by the status quo combustion energy providers.	Political
T26	The idea that solar power is still mostly science fiction and is unsustainable.	Economic
T27	Other research groups with better political support.	Political
T28	Other companies / For-Profits. Price competition. Pricing of products. Pricing of services.	Competition
T29	At some point codes may become a threat. They become more efficient, and we get to zero energy, that you essentially put yourself out of a job, because there may be no more market to research solar when there is zero energy.	Political / Technological
T30	We are now more and more burdened by political requirements.	Political

#	THREAT DESCRIPTION	CATEGORY
	Especially ROI. We have \$3M of state funds, you have to make a 4:1 Return on Investment, otherwise you will get prioritized out if you don't have. State legislature defines them, but there is a lot of interpretation.	
T31	Solar is becoming a commodity. Costs are coming down – people can walk into Home Depot or Best Buy and put in solar. Funding for FSEC has to shift to the private sector. Offer services that the private sector needs. The focus of the DOE and Utilities is smart integration combined with renewal integration. After you get past the basics of installation – how do you integrate the system at a strategic perspective?	Technological / Strategic
T32	Market the capability of FSEC properly in order to get private sector funding. Solar is getting to the point of parity. Anyone can just pick up a panel and do it. Upcoming FPL press release – about where the discussion on this is going.	Sales & Marketing
T33	We have to change the scope – we have nailed the solar equation...we have to get in front of the curve on integration, ancillary services and by-products. Research & commercialization.	R&D
T34	It sounds like there may be a customer change in the future. Who is funding us today vs. where is it going?	Sales & Marketing

TOP CHALLENGES that the FSEC faces in the next 12-24 months:

#	CHALLENGE DESCRIPTION	CATEGORY
C1	It would appear that it is now more important than ever to interact with Adam Putnam to preserve at least some political support for solar.	Political
C2	What are our objectives? I don't know. They do not seem to be posted. No goals.... that is a path to failure.	Lack of Strategic Plan
C3	Building America Funding supplies half of Building Research has been cut in half at the FED level and future program starts 8 months after current program ends.	Supplier / funding
C4	As DOE moves funding from PV applications to SMART Grid FSEC gets left out.	Supplier / funding
C5	We recently witnessed the launch Of the Orion capsule. How about replacing poles with wires conducting power. Instead use solar energy.	Political
C6	Clearly define FSEC's "Commercialization Strategy" and time line. Act more as a commercial entity with clear strategies.	General Management
C7	Partner with other UCF departments (business, finance, engineering)	Political
C8	Expanding market presence outside of FL and SE region.	Marketing & Sales
C9	Low energy prices and reversal of PSC commitments leaves demand for FSEC research at a disadvantage in this market.	Economic
C10	Reduced funding causing job elimination at FSEC.	Supplier / funding
C11	Not winning enough grants for funded research.	Supplier / funding
C12	Budget is always a top concern.	Supplier / funding
C13	Show better ROI Change staff mixture	Operations Mgmt.
C14	Rally support from industry as an honest source of science relative to energy.	Marketing & Sales
C15	Overstaffing in both management and support personnel	Operations Mgmt.

#	CHALLENGE DESCRIPTION	CATEGORY
C16	Understaffing in scientists and engineers to do the core work of R&D contracts.	General Mgmt.
C17	Overall morale	General Mgmt.
C18	Isolation from the main campus	General Mgmt. / Sales & Marketing
C19	Retention of senior staff beyond the purpose of the DROP program.	General Mgmt.
C20	We need to evaluate our labor mix: Do we have people with the talent and skills needed to succeed? (Talent is an ability to think, learn and apply, distinct from having specific knowledge.)	General Mgmt.
C21	Funding for staff	Supplier / funding
C22	New funding opportunities.	Supplier / funding
C23	New staff hires.	Supplier / funding
C24	Maintaining or adding state resources.	Supplier / funding
C25	Funding shortfall	Supplier / funding
C26	Loss of talent	Supplier / funding
C27	Infrastructure (especially research labs) obsolescence	General Mgmt.
C28	We still need to get the message out that solar is now among the most cost-effective energy opportunities for the state in the long haul.	Marketing & Sales
C29	We have a plethora of top scientists now we need persons with marketing, and economic skills.	Marketing & Sales
C30	We need to learn how to effectively allocate our internal resources to actively promote technological progress in strategic areas.	Marketing & Sales
C31	DOE being our only funding source. Any government program comes with a lot of rules. That is just the way it is the way it has to be. It takes a lot of our scientist time just to figure out if this possible approach fits the rules. It is time away from science spent on understanding the program and they spend a lot of time on the program.	Supplier / funding
C32	The lack of a marketing arm. There are lots of very good questions and people that would pay for the answers. And those answers would move everyone forward. Somebody needs to market our ability to sell answers.	Marketing & Sales
C33	Another marketing idea that would strengthen the brand. A lot of entities are venturing into the solar arena. What if we charged to test their product, and for an added fee they could advertised tested by the Florida Solar Energy Center?	Marketing & Sales

OTHER COMMENTS FROM THE SURVEY AND THE MEETING:

- Difficult to come up with Vision when all the targets are moving.
- Board members should serve a maximum 3 two year terms.
- We need to regain forward momentum in technology areas we can believe in. This requires that we identify our priorities, make a working plan for tackling the issues, allocate the resources accordingly, engage teams of researchers and staff on each aspect, and encourage creativity, forward-thinking and a sense of community with others outside our walls.
- UCF needs to start a chemical & bio-chemical engineering department that presently non-resistant. So much of what we will be doing in the area energy R&D involves chemical and bio-chemical engineering research.

WHAT ARE THE PRODUCTS / SERVICES THAT THE FSEC PRODUCES?

- Education – answers at the detailed level
- Information about what is available
- Send staff for education and training on solar technology – installation, service, etc.
- Technical Expertise in a structured approach to study and analyze for the commercial level
- Education, workforce development and information (policy)
- Policy / code development
- Research & Development
- Education
- Policy
- Solar generation, energy storage, emerging technology in fuel cells hydrogen, etc.
- Independent Qualification Testing & Evaluation – any solar device, performance testing, 3rd party testing of other products, certification, review of a process/product
- (No teeth to the requirement for FSEC testing – it is a requirement but it is not enforced)
- Outreach to potential users
- We make tools to help educate / R&D and to facilitate things in the marketplace. We make software that is used for commercial and residential.
- The product is intellectual capital – license, patent
- Accomplishment vs. activity.
- Technical services
- Patents are the sprinkles on the icing on the cake. This is not the meat and potatoes – we can deprioritize this but it should not be the main focus. Patents are a product from research, they are not the goal (MJ)

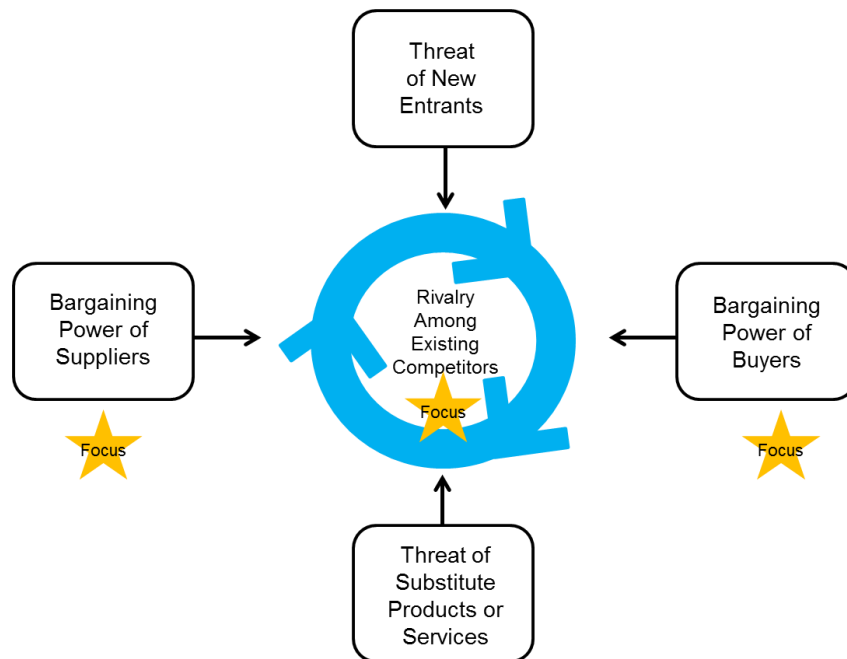
KEY TAKEAWAYS:

These are the top three items for each are of SWOT that came out of the Smart SWOT results:



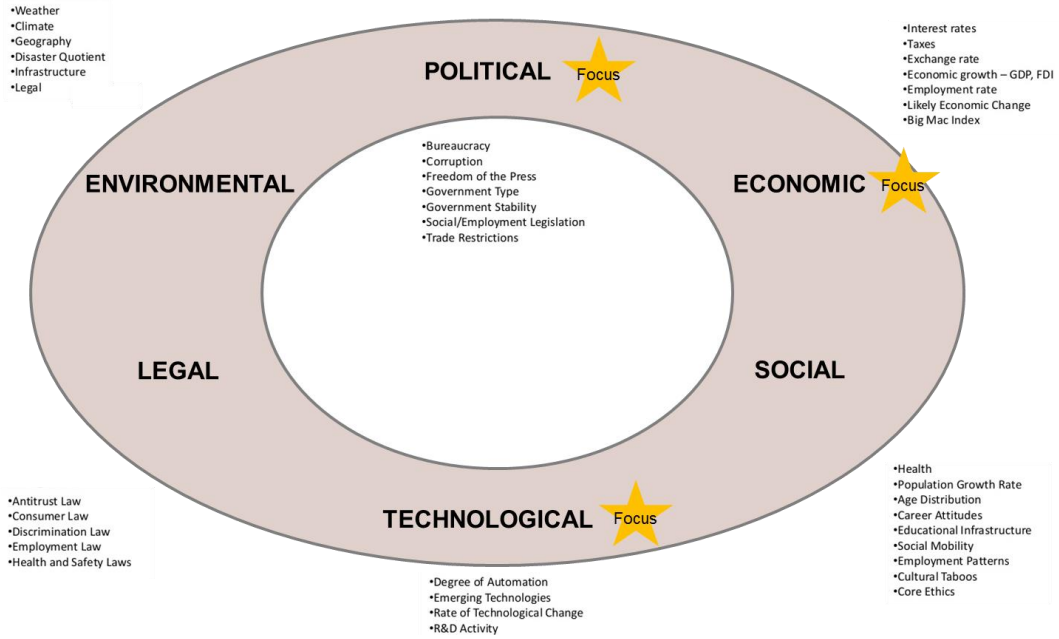
Porter's Five Forces:

Three areas of Porter's Five Forces show up as a result of categorizing the items from Smart SWOT:



PESTLE External Forces Model:

Three areas of PESTLE should be focused on based on the Smart SWOT results:



Value Chain (Primary & Support Activities):

Five areas of the Value Chain should be focused on based on the Smart SWOT results:

PRIMARY ACTIVITIES

