

# FRONT END ANALYSIS TOOL FINAL REPORT

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IDE 712 | ANALYSIS FOR HUMAN  
PERFORMANCE TECHNOLOGY  
DECISIONS

SWOT (Strengths, Weaknesses, Opportunities,  
Threats) Analysis

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## Background

The SWOT analysis is one of many tools that can be used in an organization's strategic planning and decision-making process. It can also be applied to the individual-level to assess a person's situation versus their competition further and to gain a better insight of their internal and external environment when making strategic plans and decisions. It was originally developed for business and industry, but it is equally useful in the work of community health and development, education, and even for personal growth.

### Origins of the tool

The empirical basis of SWOT started in 1952 within the Lockheed's Corporate Development Planning Department. One of its thus far unknown pioneers, Robert Franklin Stewart, became the head of the Theory and Practice of Planning group at the Stanford Research Institute in 1962 (Puyt, R., 2020). In 1965, Stewart published the so-called SOFT Approach in a report, which then evolved into SWOT Analysis in 1967. The literature review reveals that it is difficult to trace the history of SWOT. Some researchers attribute the emergence of SWOT to different authors and time periods. While some scholars highlight importance of Harvard Business School as the epicenter of SWOT, others look to Stanford University, or even other more recent authors in the field of strategic management (Madsen, D. Ø., 2016). However, the tool is historically credited to Albert Humphrey in the 1960s, but this attribution remains debatable. There is no universally accepted creator (Teoli, D., 2022). It became a commonly used method for analyzing and positioning resources and environment in four regions (Strengths, Weaknesses, Opportunities, and Threats).

### What is SWOT Analysis?

SWOT analysis is a type of diagram widely used for exploring strengths, weaknesses, opportunities, and threats in a given situation. It considers four main components:

- **Strengths** - are the internal factors of an individual or organization that are helpful to achieving the objective(s) (e.g., ability, knowledge, relationships, etc.,)
- **Weaknesses** - are the internal factors that are harmful and cause disadvantage to an individual or organization (e.g., lack of resources, lack of knowledge, etc.,)
- **Opportunities** - are the external factors in the greater environment that can be exploited to benefit the individual or organization and leveraged for success.

- **Threats** - are the external factors that lead to problems that could damage the performance or endanger the success.

Strengths and weaknesses are internally related, while opportunities and threats are externally related. Given that the SWOT Analysis looks at factors both inside and outside an entity, it is also occasionally labeled as an Internal-External Analysis. In consideration of the broad nature of the tool, it has both organizational and individual utility (Teoli, D., 2022).

### Type of Information Collected

The SWOT analysis considers internal and external factors to maximize the potential of strengths and opportunities and minimize the impact of weaknesses and threats. Internal analysis includes factors within the organization that might be considered a strength or weakness and could be leveraged to take advantage of strengths and opportunities and fix or reduce weaknesses and mitigate threats. External analysis analyzes factors in the societal environment, as well as factors in the industry environment.

Internal Analysis Identifying strengths and weaknesses	External Analysis Discovering opportunities and threats
<ul style="list-style-type: none"> <li>• <i>Experience</i> (e.g., special understanding of community, customers, or processes)</li> <li>• <i>Past experiences</i> (e.g., building blocks for learning and success, reputation in the community)</li> <li>• <i>Human resources</i> (e.g., staff, volunteers, board members, target population)</li> <li>• <i>Physical/ Tangible resources</i> (e.g., location, building, equipment)</li> <li>• <i>Financial</i> (e.g., grants, funding agencies, other sources of income)</li> <li>• <i>Activities and processes</i> (e.g., programs, systems)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Industry environment</i> (e.g., customers, competitors, and suppliers)</li> <li>• <i>Societal environment</i> (Socio-cultural) <ul style="list-style-type: none"> <li>○ <i>Economic</i> (local, national, or international)- What impact do they have on your organization? How does the local, national, or international economy affect your activities?</li> <li>○ <i>Demographics and psychographic</i>- changes in the target audience's age, race, gender, culture, attitudes, values, or mindset</li> <li>○ <i>Funding sources</i>- foundations, donors, legislatures</li> <li>○ <i>Technology</i>- Future trends in the field</li> <li>○ <i>Political-legal</i>- Do new federal requirements make job harder/easier?</li> </ul> </li> </ul>

## Purpose

SWOT analysis can be used for many purposes during implementation (e.g., to make strategic choices if changes in the context are identified) or evaluation to ensure that the implemented strategy is appropriate to the situation described in the analysis. It is fundamentally about discovering what an individual or organization can do well, how they could improve, whether making the most of the opportunities around them, and whether there are any changes (e.g., technological developments) that call for corresponding changes in the system. Its purposes are to match the strengths and weaknesses of an individual/organization with the external environment and find a balance point or development opportunity and to reveal positive forces that work together and potential threats that need to be recognized and possibly addressed.

## Why SWOT Analysis?

### *Elevates data integration*

It provides a unique combination of qualitative and quantitative data that aids in decision-making and augments positive planning and communication. Also, it can be expanded and developed to establish a foundation for stimulating the advantages and minimize the disadvantages.

- In SO quadrant, organizations can make full advantage of strengths to create opportunities by assessing strengths case-by-case basis to determine them.
- In WO quadrant, organizations can overcome weaknesses to promote/ seize opportunities by determining weaknesses that can be eliminated by external opportunities.
- In ST quadrant, organizations can use strengths to eliminate threats by assessing strengths that can be used to reduce the impact of threats.
- In WT quadrant, organizations can address any negative assumptions and limit negative risks and effects by assessing how the weaknesses can be addressed to make these threats a reality.

### *Provides multiple viewpoints*

It gives four different views of the same objective and allows to create both proactive and reactive strategies for internal and external elements that may craft an individual or organization success. This element satisfies and engages employees and provides management with an opportunity to incorporate everyone's ideas and viewpoints.

### *Fosters communication*

Having the team take active roles in strategic planning promotes open discussion and communication. It promotes group discussion about strategic issues and strategy development. By using creative participatory techniques such as brain storming, group meetings, it enables the pool knowledge (Gürel, E., 2017).

## **Assumptions**

SWOT analysis is said to be able to give an overall picture of the present situation which would help initiating competent programs or replacing redundant, irrelevant programs with innovative and relevant ones (Hassaskhah, J., 2016). It can be applied at different analytical levels (e.g., individual, organizational, national, international). It can be used by educational institutes, non-profit organizations, countries, governments. etc. (Gürel, E., 2017).

### *Creating Strategic Responses*

SWOT is good at capturing input factors. It needs to be extended and/or redrawn to create strategic outputs. It facilitates an understanding of the strengths and weaknesses of the organization to spot opportunities and exploit them fully and to anticipate future threats and take action to avoid or minimize their impact. In using the extended quadrants, organizations can make a good use of opportunities through existing strengths, make good use of strengths to eliminate or reduce the impact of threats, take into account weaknesses to obtain the benefits of opportunities, and seek to reduce the impact of threats by considering weaknesses. (Abdel-Basset, M., 2018)

### *Surrounding Method*

To make SWOT useful, a surrounding method, almost a project plan, is needed to take through the whole process from input, analysis, choices, and strategic actions. It is a road map that guides one from the general to the specific. It can be done at the start of a project to consider strategic aspects of the effort before engaging and get potentially bogged down. It doesn't require hiring anyone or renting expensive equipment. Periodic SWOT analysis, followed by needs analysis and teamwork, is a convenient and cost-effective tool for the evaluation.

SWOT presents general perspective and general solutions. It can help organizations to uncover opportunities to take advantage and quickly underlines the adequacy or inadequacy of a strategy, in relation to the problems and issues under consideration and in supporting decision-making processes.

## Constraints

According to Hill and Westbrook (1997), SWOT Analysis is a technique started to be used in 1960's and expired long ago. When SWOT is misused and applied as a general activity without a specific focus, it is also known as Significant Waste of Time. The most common constraints of the tool occur when there is an external opportunity, but the internal situation is not conducive to taking advantage of the opportunity.

### *Insufficient context*

Haberberg (2000) concurs and explains SWOT analysis does not provide a sufficient context for adequate strategy optimization and states the simplicity leads managers to use it incorrectly, producing short lists of non-prioritized, generalized bullet points. (Helms, M., 2010). SWOT Analysis focuses on environment which is too narrow. Strategist who relies on traditional definitions of their industry and competitive environment often focus their sights too narrowly on current customers, technologies, and competitors.

### *Subjective Analysis*

Even when well-conceived, SWOT analysis is subjective. It should therefore involve a representative number of stakeholders. SWOT analysis is based on ideas, expertise, and assertions of experts. Distinguishing between internal and external factors may sometimes be challenging. The discussion environment that it creates mean a loss of time for organizational managers and strategy consultants. Listing strengths is prone to bias and is very different from testing the organization and experiencing the strengths at work.

### *Issues in categorizing of variables*

The categorization of variables into one of the four SWOT quadrants is challenging. The same factor can be fitted in two categories. A factor can be a strength and a weakness at the same time. In addition, strengths that are not maintained may become weaknesses. Opportunities not taken, but adopted by competitors, may become threats. Strengths that are not maintained may become weaknesses The classification of a variable also depends on the purpose of the practice. Details and specific issues are not the focus of SWOT Analysis, but the other analyses that would follow.

*No strategic direction provided*

While it is useful to profile and enumerate issues, it does not provide actual strategies to implement to take advantage of opportunities while leveraging strengths. Often too the simple list of words or bullet points without more detail may be difficult to interpret. The terse format may be an oversimplification of a situation that is more complex. It does not represent the complete analysis so it may lead to inaccurate results. Strengths may not lead to an advantage. SWOT Analysis overemphasizes a single dimension of strategy. Sometimes organizations become preoccupied with a single strength or a key feature of the product or service they are offering and ignore other factors needed for competitive success (Gürel, E., 2017).

The notion of SWOT is somewhat elusive and, according to Pickton and Wright (1998), produces a superficial listing output that makes it dangerously simplistic in its structure. An organization's strengths and capabilities, no matter how unique or impressive, may not enable it to achieve competitive advantage in the marketplace (Gürel, E., 2017).

## **Context**

Context is critical to the effective use of SWOT. A good quality SWOT analysis starts with the understanding of the context, typically statements of an individual or organization's environment, then proceeds to analyze a specific situation or idea. Without a context and/or purpose, the result is often somewhat vague statements masquerading as a strategy. When SWOT analysis is used as a tool for context analysis, it complements PESTEL by identifying possible strategic approaches. It is meant to evaluate the present, not the past or the future. It can be used to assess and consider a range of goals and action plans in:

- creating and developing products or services
- making hiring, promotion, or other human resources decisions
- evaluating and improving opportunities and performance
- setting strategies to improve competitiveness
- making investments in technologies, geographical locations, or markets
- expanding into a new market or potential partnership

## **How to Conduct a SWOT Analysis**

A SWOT analysis diagram is formed by a two-by-two grid. By listing favorable and unfavorable internal and external issues in the four quadrants grid, planners can better understand



how strengths can be leveraged to realize new opportunities and understand how weaknesses can slow progress or magnify organizational threats. (Helms, M., 2010) After checking the resources, I came up with the following steps on how to conduct a SWOT Analysis.

1. *Establish goals*- Clearly define the scope and think of how to achieve and/or preserve strengths and opportunities and avoid and/or eliminate.
2. *Determine objectives*- Decide on a key project or strategy to analyze and narrow down the analysis to an ideal outcome of the project.
3. *Gather resources*- All relevant people in the process should be involved. Data should be gathered from all the involved parties in the organization.
4. *Compile the key strategic issues*- Think out of the box and list favorable and unfavorable internal and external issues.
5. *Create a grid*- Label each box and determine scope along the four dimensions:
  - *Assess strengths* - Positive internal factors controlled by the organization that provide foundations for the future.
  - *Address weaknesses*- Negative internal elements that are controlled by the organization and to which key improvements can be made.
  - *Outline opportunities*- Positive externalities that can provide an advantage for the intervention but remain beyond its control.
  - *Identify threats*- Negative externalities that can put the organization at risk but remain beyond its control.
6. *Refine the findings*- Review and decide which items need immediate action and make a separate list ranking those that are the most important.
7. *Convert harmful into helpful factors*- Match Opportunities and Threats to Strengths and Weaknesses.
8. *Draw conclusions*- Analyze the finished diagram and consider whether the positive outcomes outweigh the negative.
9. *Develop an actionable strategy*- Define actions to deploy the strategy and set up strategic objectives and critical success factors for the initiative.
10. *Implement and manage the chosen strategy*- Ensure to regularly review the progress and conduct further SWOT analyses if needed.

## Tool Example

### Copy of the tool

		INTERNAL	EXTERNAL
POSITIVE	<input type="radio"/>	Interdisciplinary approach (28)	(24) Alignment with policies & strategies <input type="radio"/>
	<input type="checkbox"/>	Improved accounting for nature (24)	(18) Alignment with existing tools & methods <input type="radio"/>
	<input type="radio"/>	Holistic approach (16)	(17) Increasing environmental awareness <input type="checkbox"/>
	<input type="radio"/>	Advocacy and communication tool (13)	(16) Operationalization of sustainability <input type="checkbox"/>
	<input type="checkbox"/>	Increased societal engagement (9)	(14) Demand for ecosystem management <input type="checkbox"/>
	<input type="checkbox"/>	Equity in natural resource allocation (9)	(9) Interest of societal actors <input type="checkbox"/>
	<input type="checkbox"/>	Reconnecting people to nature (7)	(8) Policy awareness <input type="checkbox"/>
	<input type="radio"/>	Conceptual simplicity (5)	(7) More funding <input type="checkbox"/>
	<input type="radio"/>	Knowledge base (5)	(4) Technological advancements <input type="checkbox"/>
	<input type="radio"/>	Works on different scales (3)	(2) Institutionalisation of nature's value <input type="checkbox"/>
		<b>STRENGTHS</b>	<b>OPPORTUNITIES</b>
NEGATIVE	<input type="checkbox"/>	Scientific basis incomplete (20)	(32) Resistance to change environmental practices <input type="checkbox"/>
	<input type="checkbox"/>	Framework inconsistently applied (16)	(19) Difficulty of interdisciplinary work <input type="radio"/>
	<input type="radio"/>	Disregarding intrinsic value of nature (14)	(14) Insufficient funding <input type="radio"/>
	<input type="checkbox"/>	Ambiguous language (13)	(13) Loss of political interest <input type="checkbox"/>
	<input type="radio"/>	Overemphasis on monetary values (11)	(13) Lack of institutional capability <input type="checkbox"/>
	<input type="radio"/>	Some ecosystem services poorly represented (9)	(8) Competing approaches <input type="checkbox"/>
	<input type="checkbox"/>	Large resources needed to apply framework (8)	(7) Loss of interest from researchers <input type="checkbox"/>
	<input type="checkbox"/>	Inaccessible to non-specialists (6)	(6) Misuse of environmental tools <input type="checkbox"/>
	<input type="checkbox"/>	Benefits poorly understood (6)	(5) Lack of awareness across general public <input type="checkbox"/>
	<input type="radio"/>	Oversimplification (5)	(2) Environmental ethics viewpoint <input type="radio"/>
		<b>WEAKNESSES</b>	<b>THREATS</b>
NEGATIVE	<input type="radio"/>	Difficult to apply (5)	
	<input type="radio"/>	Scale-dependence of outcomes (4)	
	<input type="checkbox"/>	Need for better tools (3)	

### Article

Strengths, Weaknesses, Opportunities and Threats: A SWOT analysis of the ecosystem services framework. <https://www.sciencedirect-com.libezproxy2.syr.edu/science/article/pii/S2212041615300620>

Using a SWOT analysis, the Young Ecosystem Services Specialists (YESS) derived strategies for further development of the ES (ecosystem services) field. They conducted the study through the following procedure.

1. Survey respondents
2. SWOT analysis and development of strategies
3. Analytical procedure
4. Final survey respondent demographics

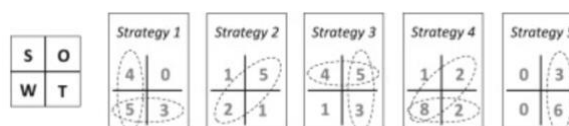
5. Breakdown of outcomes by SWOT category

- a) What are the Strengths of the ES framework to achieve a more sustainable relationship between human society and nature?
- b) What are the Weaknesses of the ES framework to achieve a more sustainable relationship between human society and nature?
- c) What Opportunities exist within the larger world that might support application of the ES framework to help achieve a more sustainable relationship between human society and nature?
- d) What are the Threats within the larger world that might undermine the application of the ES framework to help achieve a more sustainable relationship between human society and nature?

6. Strategy development based upon the SWOT

1. ES concept characteristics	○
2. Application of the ES concept	□
3. Effects of ES concept application	►
4. Demands of ES concept application	+
5. User interface of the ES concept	★

7. Conceptual representation of strategy development and distribution of SWOT themes for each strategy topic.



- a) In Strategy 1, they consider a **strength–weakness (SW)** combination, and how to use identified Strengths to overcome Weaknesses.
- b) In Strategy 2, they consider the use of external Opportunities to overcome internal Weaknesses, with themes in the **weakness–opportunities (WO)** quadrants.
- c) In Strategy 3, they consider the potential use of the ES framework to overcome Threats, given a combination of **strengths, opportunities, and threats (SOT)**.
- d) In Strategy 4, the concerns dealing directly with barriers to the application of the ES, with a focus upon **weaknesses, threats, and some opportunities (WTO)**.
- e) In Strategy 5, a strategy that focuses upon external issues, i.e., **opportunity–threat (OT)** quadrants, is necessary.

## Critique of the Article

### Strengths

#### *Methodology*

*A mixed methods research strategy (Teddlie and Tashakkori, 2011) was employed, in the form of online surveys and face-to-face discussion groups, to elicit the perceptions from YESS members on the Strengths, Weaknesses, Opportunities and Threats of the ES framework...*

They applied a mixed methods approach that allowed researchers to better capture the richness and complexities of the phenomena under study than by using a singularly qualitative or quantitative approach. I can see the how their chosen data collection methods, online surveys with a follow up face-to-face discussion groups, helped to kick off their strategic planning. It is a way to rapidly gather information, identify different viewpoints and uncover immediate priorities. In many cases tactical or operational issues can be immediately turned into action plans and delegated for implementation.

#### *Strategy development*

*This distribution of themes across the SWOT quadrants was used as a starting point for identifying topic related strategies. These were considered useful under the assumption that a single overarching strategy may not be suited to capture the complexity of the problem and may also not be sufficiently tailored for those working in their respective context within the ES framework.*

By engaging their members in the process, they were able to move faster with better information, immediately engage their employees with a focus on real data and make better recommendations. I see the emphasis on proper analysis of the SWOT survey/ discussion groups results as a powerful tool for getting a snapshot of an organization's strategic planning. Getting alignment to take action is a primary benefit of a SWOT Analysis. The participants feel a sense of accomplishment from being united on what needs to be done and having a plan to achieve it.

I think SWOT provided a platform to exchange ideas and find agreement or otherwise among the YESS community and contributed to building the community itself. The results of the SWOT analysis they conducted allowed assessing the relative importance of different themes under the four SWOT categories, from the perspective of a group of ES early career researchers and practitioners. Their approach encouraged the development of strategic thinking and enabled them to focus on strengths and build opportunities.

## Weaknesses

### *Data based on assumptions*

*The respondents to the survey were biased towards the natural sciences and environmental and ecological economics. Therefore, the outcomes may be different if the same survey approach was carried out using a more diverse academic sample...*

The data used may be based on assumptions that later prove to be unfounded. The input for each component can often be empirical or subjective and give a skewed perspective. SWOT usually reflects a person's existing position and viewpoint, which can be misused to justify a previously decided course of action rather than used as a means to open up new possibilities. Although SWOT analysis stands out for its simplicity and value in focusing attention on key issues, it entails limitations like unclear classification of items as strengths, weaknesses, opportunities or threats, or over-subjectivity in the generation of themes due to compiler bias.

### *Classification challenges*

*Although SWOT analysis stands out for its simplicity and value in focusing attention on key issues, it entails limitations – for example unclear classification of items as strengths, weaknesses, opportunities or threats, or over-subjectivity in the generation of themes due to compiler bias (Pickton and Wright, 1998).*

After all the readings, one common pitfall when conducting a SWOT analysis that I learned is the ambiguity between what is internal and what is external. The differences between internal and external issues may be difficult to spot. Also, threats that are acted upon quickly and effectively may be rally opportunities. Emerging technologies have often not yet proved themselves as strength or a weakness. For example, often threats can be called "opportunities", but setbacks and catastrophes are real problems and cannot be classified as opportunities. The classification of a variable also depends on the purpose of the project. Criteria to assign a variable to one of the four quadrants may be more difficult to clarify if the methodology is not used properly.

Overall, since it only captures factors at a particular point in time and doesn't allow for how those factors could change over time, the insight SWOT offers in this article can have a limited shelf life. However, the study was able to capture and document the findings of their SWOT analysis by referring to the defined goals and objectives in the plan when considering the issues identified, which allowed them to derive strategies for further development of the ES field.

## **Conclusion**

SWOT analysis can provide the foundation for realization of the desired alignment of organizational variables or issues and can encourage many different perspectives and approaches. Although it is important for understanding the many dynamics that affect success, the analysis does have limits. Every SWOT analysis will vary, and an organization may need different data sets to support pulling together different SWOT analysis tables. An organization should begin by understanding what information it has access to, what data limitations it faces, and how reliable its external data sources are. Therefore, SWOT is only one of many strategy-making tools as the individual or organization still has to do the work, interpret the analysis, and make decisions. I believe that taking advantage of strengths, minimizing weaknesses, exploiting opportunities, and neutralizing threats are good ways to an effective use of this tool.

## References

- Bull, J. W. et.al. (2016, February). *Strengths, Weaknesses, Opportunities and Threats: A SWOT analysis of the ecosystem services framework*. Science Direct. Retrieved from: [https://www-sciencedirect-com.libezproxy2.syr.edu/science/article/pii/S2212041615300620](https://www.sciencedirect-com.libezproxy2.syr.edu/science/article/pii/S2212041615300620)
- Teoli, D. (2022, December). *SWOT analysis*. National Library of Medicine. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK537302/>
- Puyt, R., et. al., (2020, July). *Origins of SWOT analysis*. Academy of Management Proceedings. Retrieved from: <https://journals.aom.org/doi/10.5465/AMBPP.2020.132>
- Madsen, D. Ø. (2016, March 22). *SWOT ANALYSIS: A management fashion perspective*. SSRN. Retrieved from: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2615722](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2615722)
- Gürel, E. (2017, August). *SWOT Analysis: A Theoretical Review*. The Journal of International Social Research. Retrieved from: [https://www.researchgate.net/publication/319367788\\_SWOT\\_ANALYSIS\\_A\\_THEORETICAL\\_REVIEW](https://www.researchgate.net/publication/319367788_SWOT_ANALYSIS_A_THEORETICAL_REVIEW)
- Helms, M., & Nixon, J (2010). *Exploring SWOT analysis - where are we now? A review of academic research from the last decade*. Journal of Strategy and Management. Retrieved from: <https://www.proquest.com/docview/758229537?accountid=14214&parentSessionId=ifwPpIOS6Q4qsuLAfhIW9VFzahbH2rCoX0VUp4Z3PVI%3D&pq-origsite=summon>
- Abdel-Basset, M., et. al., (2018) *An Extension of Neutrosophic AHP–SWOT Analysis for Strategic Planning and Decision-Making*. Symmetry. Retrieved from: <https://www.proquest.com/docview/2040897479?parentSessionId=FkWPcygI5t9si1LonwIyMynhh9XPd1D8zOHOU4H8Vu0%3D&pq-origsite=summon&accountid=14214>