# From Engineer to Social Entrepreneur: A Narrative Study of an Engineer Launching Their Technology Social Venture

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## Abstract

Engineering skills are increasingly in demand in solving pressing social challenges around the world, such as healthcare accessibility, water scarcity, and extreme weather. To develop engineers who can tackle such social challenges with their technical knowledge, we are studying technology-based social ventures (TSVs), organizations that address social challenges based on their technical competencies. While such ventures are getting more attention, how engineers come to pursue such a career as a social entrepreneur is not well understood. There has been a limited discussion on the personal and professional metamorphosis involved in this process. To fill this gap, we need a deeper inquiry into the subjective experiences of individuals who launched their TSVs with engineering backgrounds. Therefore, this study is guided by the following research question: How does an engineer make sense of and experience the personal and professional transition from a technical professional to a social entrepreneur through the creation of a technology-based social venture?

To answer this research question, this study employs a narrative analysis of existing interview data to investigate the experience of an engineer who started a technology-based social venture. To obtain participants' narratives, we conducted in-depth, semi-structured interviews. While multiple interviews were conducted with multiple engineer-entrepreneurs, we focus on introducing one narrative that well illustrates the transition experience in this paper. During the analysis, the focus was on reconstructing the narrative of the transition experience of the engineer based on Schlossberg's Transition Theory. This study uncovers the detailed processes that shape the career path of an engineer-social entrepreneur. The findings provide a rich, contextualized understanding of such transformation and inform the development of the engineering curriculum, which aims at nurturing an entrepreneurial engineering workforce with social responsibility. Professional development programs and entrepreneurial ecosystem supporters can also benefit from the findings by better understanding how engineers with a solid technical background become entrepreneurs who can create social value.


## 1. Introduction

Global challenges such as healthcare disparities, water scarcity, and climate change require innovative solutions that connect technical expertise with social impact [1]. Social entrepreneurship, one of the important pathways for dealing with these challenges [2], is at the forefront of this movement. Within the social entrepreneurship pathway are Technology Social Ventures (TSVs), which have appeared as a form of enterprises that employ technologies to achieve their desired social impact [3], [33]. With engineering and technological knowledge, social ventures may be able to amplify their ability to offer community-level, scalable solutions for those facing systemic barriers, such as poverty, inequality, and environmental degradation, which they have already offered without leveraging specific technologies [4], [5].

Engineers are trained to solve technical problems; however, in recent times, because of the global scale of problems, there has been a substantive shift in the existing context. Engineers are now expected to collaborate with diverse communities, understand a multitude of local requirements, and tailor solutions to different cultural and social settings [6]. Engineering students are increasingly motivated to pursue social entrepreneurship as a career, driven by a strong sense of social awareness, a desire to make a positive impact, and the satisfaction gained from addressing societal challenges through innovative solutions [7]. Engineers who engage in social entrepreneurship are motivated by a purpose, have emotional connections with the issues faced by society, and have a firm belief that their work should result in the creation of positive changes. The transition of these engineers into social entrepreneurship may be influenced by their personal characteristics, such as creativity, persistence, and prior work experience, as well as external factors, such as education, mentors, and social networks [8], [9]. Even though these characteristics and work experiences help us to understand engineers' initial interest in social entrepreneurship, their journey of transitioning into social entrepreneurs is largely unknown.

While there is an increasing importance of social entrepreneurship among engineers, there is a gap in the understanding of the transition experience of the engineers engaging in social entrepreneurship. A narrative study, which explores how the engineers interpret and construct their experiences while transitioning into social entrepreneurs, can fill this gap. Therefore, using Schlossberg's (1981) Transition Theory, this study explores the personal and professional transformation involved in an engineer, Craig, transition from technical professional to social entrepreneur through the creation of a technology-based social venture. This work is guided by the following research question: *How does an engineer make sense of and experience the personal and professional transition from a technical professional to a social entrepreneur through the creation of a technology-based social venture?*

## 2. Literature Review

### 2.1 The Rise and Role of Technology-Based Social Ventures (TSVs)

Global challenges like climate change, unequal distribution of resources, healthcare disparities, and accessibility barriers have intensified calls for solutions that combine technological innovation with social value creation [1], [Blinded for review]. Public concern and national reporting continue to show the urgency of these issues; for example, Pew Research recognizes climate change as a major societal problem [10]. In response to such reports, TSVs have become one of the main contributors to sustainable innovation [11], [12]. Unlike traditional ventures, TSVs employ their engineering and technological knowledge to tackle systematic social issues, support the traditional markets and public institutions, and fill the gaps of essential services and infrastructure such as clean water, healthcare, and environmental sustainability [11], [12], [13].

By leveraging technological capabilities, these ventures develop scalable and context-sensitive solutions that target systemic social challenges and promote long-term sustainability. With increasing interest in sustainability-directed tech innovation, researchers emphasize the necessity for systematic and structured methods that will enable the full realization of the beneficial effects of technology on society and the environment [1], [12].

### 2.2 Motivations and Influences Shaping Engineers' Social Entrepreneurial Intentions

Engineers often move towards social entrepreneurship due to an intrinsic motivation, which includes a strong sense of purpose, empathy toward societal challenges, and a desire to create meaningful social impact through their technical expertise [11], [14], [15]. For example, engineers and engineering students may participate in sustainability projects, humanitarian engineering courses, service-learning, community-based design work, or volunteer and pro bono technical efforts that aim to address public needs [7], [11]. Primary attractions are creativity, the belief in oneself, and the availability of support through personal experiences [16], [17].

In addition to intrinsic motivation, the influence of external factors plays a critical role in shaping an engineer's intention to pursue a social entrepreneurial pathway [15]. Creativity, self-confidence, and personal history are among the factors that positively contribute to an engineer's willingness to enter the realm of social entrepreneurship when combined with contextual supports, such as education, mentoring, and access to professional networks [16], [17]. Social acceptance also supports a considerable part, especially in the case of the less represented groups, like women in STEM [18], [19], [20]. Prior research suggests that seeing individuals from similar backgrounds successfully engage in entrepreneurship can legitimize these pathways**,** reduce perceived barriers, and increase confidence in one's ability to pursue socially oriented ventures [21].

The combination of intrinsic and extrinsic motivators elucidates not only why engineers' may desire creating societal impact but also the ways they may achieve those desired impacts through socially conscious, entrepreneurial actions. For example, engineers may initially express their social motivation through service-learning projects, humanitarian engineering courses, volunteer work, or community-based design initiatives that operate within existing institutions or temporary programs [7], [11]. This contrasts with previous forms of socially responsible engagement that were non-venture.

### 2.3 Education and Ecosystem Support

Social entrepreneurship courses were first introduced in business schools in the early 2000s [22], [23]. Early social entrepreneurship education primarily aimed to raise students' awareness of social issues and equip them with the necessary entrepreneurial tools, such as opportunity recognition, business modeling, and resource mobilization, to solve them [24]. These foundational efforts focused on developing students' understanding of social challenges and providing practical skills for launching and sustaining social ventures. Over time, the scope of social entrepreneurship education has broadened significantly. More recently, particular attention has been paid to technology-based social entrepreneurship, which aims to transform students with science, technology, engineering, and mathematics (STEM) backgrounds into social problem-solvers [11].

In response to this shift, educational approaches play a critical role because they make it possible for engineering students to get acquainted with the uncertainty, complexity, and value tradeoffs

that are typical of societal challenges and technology-based social entrepreneurship. Experiential, multidisciplinary, and project-based learning supports the development of entrepreneurial and social competencies among engineering students [14], [16]. A curriculum that is based on design thinking, along with community involvement, creates the necessary mindset for TSVs [11], [25] due to their emphasis on the qualities of empathy, problem-solving, and iterative learning in cooperation with the affected communities, which are all essential to discovering socially relevant and context-appropriate technological solutions.

To support the development of engineers who can translate technical expertise into socially impactful ventures, several academic programs have emerged [11]. For instance, Penn State offers a Humanitarian Engineering and Social Entrepreneurship (HESE) course to its students. Similarly, Stanford University offers Design for Extreme Affordability, which invites students from across disciplines to design innovative, community-driven solutions. Additionally, academic engineering journals, such as the International Journal for Service Learning in Engineering and the Journal of Humanitarian Engineering, encourage and disseminate information and research to support this growing field and those working within it.

## 3. Theoretical Framework

Schlossberg's (1981) Transition Theory [26] identifies a change as any happening or non-happening that leads to the transformation of an individual's interconnectedness, routines, beliefs, and roles. Schlossberg differentiates these transformations into three categories: anticipated (or chosen), unanticipated (or surprise), and non-events (which are the expected transitions that do not happen). The transition that is the focus of this research corresponds most closely to an anticipated transition, since the engineers seem to be deliberately going for social entrepreneurship after getting to know the social problems, being bored with traditional engineering jobs, or even coming across different career paths. Yet there might also be elements of surprise or non-events that would impact this transition, e.g., career expectations in engineering that have not been fulfilled or postponed chances to make a social impact. The transitions are viewed through this prism, and thus, it is seen as a very dynamic and evolving process rather than just one point of decision. The major aspect of Schlossberg's model is the way individuals cope with their transitions and how those are made possible by the resources that they would normally apply in other situations.

Applying Schlossberg's Transition Theory on the engineer-to-social-entrepreneur route is very useful since it incorporates the individual value of meaning-making and the wider contextual influences that are affecting the transition. The transition from an engineer to a social entrepreneur is a major professional and identity transition whereby the individual changes his or her view of the work, the community he or she interacts with, and the area of application of his or her technical expertise in the creation of social value. The framework does not just look at motivations or outcomes but rather allows for a deeper analysis of how the engineers, in the first place, perceive and then go through the whole transition into technology-based social entrepreneurship. Thus, this theory is very much in line with the study's research question, and it also promotes a vivid, narrative-based comprehension of professional and identity transformation.

These resources for coping have been divided into the 4S system that includes Situation, Self, Support, and Strategies. In this study, the *situation* is characterized as increasing global social awareness, the discontent of engineers with the roles traditionally assigned to them, and the opening of new avenues for participating in technology-based social ventures. The *self*-dimension involves the attributes of individuals, such as their purpose, empathy, creativity, perseverance, and past technical experience, which play a large part in the way that engineers see the change and react to it. Forming part of the *support* group are mentors, education programs, professional networks, and entrepreneurial ecosystems that provide guidance and support throughout the process. The term *strategies* finally stand for the actions taken by engineers to bridge the gap caused by the transition: developing new skills, engaging with the community, and reshaping their professional identities so that technical expertise becomes synonymous with social impact.

Finally, Schlossberg's theory views transitions as taking place over three major stages: moving in, moving through, and moving out. These stages provide a temporal framework that is very close to the research question and the narrative inquiry method used in this study. The moving-in stage illustrates how the engineers at first see and become involved in social entrepreneurship. The moving through stage is a period of adjustment that is characterized by learning, trial and error, identity negotiation, and uncertainty while the engineers come up with and fine-tune their technology-based social ventures. The moving out stage is when the individuals have merged their engineering skills with a social cause and have acquired a more confident professional identity as social entrepreneurs.

## 4. Methods

This study employed narrative analysis as the methodological approach to examine how an engineer transitions into social entrepreneurship. Narrative analysis is particularly suitable for the investigation of lived experiences and career transitions as it helps researchers to identify the ways individuals generate meaning from past events, and how they interpret the actions, decisions, and contexts that influence their professional paths [27], [28]. Since this study aimed to comprehend the way an engineer experiences and makes sense of the shift from tech expert to social entrepreneur, narrative analysis emerged as a fitting framework for portraying the complexity and timing of this process.

Narrative analysis aligns closely with Schlossberg's (1981) Transition Theory [26], which provides a view of transitions as the gradual process of passing through. Likewise, narrative analysis underlines the reconstruction of experience in the form of a unified story, admitting that people look back at their lives and choose significant events to give a reason for change rather than going through transitions as separate, isolated points in time [27]. The theory has also been applied in narrative analysis previously, particularly in the context of engineers' academic and career transitions [29], [30], [31]. These alignments support the analysis of the participant's narrative in a chronological way while still being open to personal meaning-making and contextual influences.

### 4.1 Study Participant

Although the broader population of interest for this study includes engineers who have transitioned into social entrepreneurship, narrative analysis permits an in-depth focus on a single participant [27]. This study is about Craig (pseudonym), who has an academic background in mechanical engineering and has established a technology-based social venture around water purification for underdeveloped communities in Central America. Craig was intentionally chosen because his professional path was in line with the research question and offered a rich experience regarding the transition from engineer to social entrepreneur.

Craig's qualifications as an engineer and his firsthand experience of bringing a technology-based social venture into operation make him a highly informative case. The study of one participant made it possible to identify and make meaning of the details and contexts of the individual, relational, and situational factors that influenced the transition. Such a procedure is in line with narrative inquiry, which underscores the depth of exploration and meaning-making over generalization [32].

### 4.2 Data Collection

Data from this narrative analysis is pulled from a larger qualitative research project examining engineers' pathways into technology-based social entrepreneurship. Within this larger project, a considerable number of in-depth interviews were held with engineers who have founded or co-founded social ventures using technology. For the current research, one interview was chosen for the detailed narrative analysis, which allowed an in-depth exploration of the transitional experience of that one engineer, thus being in line with narrative inquiry's focus on depth and meaning-making rather than breadth [27], [28].

The interview protocol consisted of questions that encouraged Craig to reflect on key moments and challenges across his transition journey: from the identification of his societal challenge of interest to the launching experience of his TSV. The interview was held online, lasting about an hour, recording the audio with the participant's approval, and transcribed verbatim to make sure it was correct and to keep the participant's voice.

Schlossberg’s Transition Theory was not applied in a way to structure or confine the interview questions; instead, it was used in the analysis phase as an interpretive lens. The interview protocol was designed to elicit an open narrative of Craig’s transition. Once this was collected, the theory’s main constructs, situation, self, support, and strategies, as well as the timeframes of moving in, moving through, and moving out, were applied during coding to assist in thematic analysis and restoration of the narrative.

### 4.3 Data Analysis

The narrative data analysis was done following the methodology described by [27]. Consistent with the analysis on Schlossberg’s (1981) Transition Theory [26], we set predetermined codes for situation, self, support, and strategy, which were meant to show Craig’s explanation of the contextual circumstances, personal meaning-making, relational resources, and action-oriented responses during his transition. Moreover, in vivo codes were allowed to emerge to keep Craig's words and highlight the moments that were very important to him.

The transcript was read multiple times, starting with whole readings to pinpoint key events, turning points, and changes in roles and beliefs, and then moving to more specific readings in which text segments were coded with both a priori and emerging codes. The coded parts of the text were then assembled into a clear developing account [28] by "restorying" Craig's experience in a chronological manner, using Schlossberg's three transition phases of moving in, moving through, and moving out.

Theme and subtheme interpretation were done within every phase to show how Craig went through and made sense of his transition from engineer to social entrepreneur. The final representation of the analysis is in the findings section as a chronological narrative with direct quotations used to show the dynamic interplay among situation, self, support, and strategy throughout the transition [26], [27].

## 5. Findings

The findings are organized chronologically through the application of Schlossberg's transition stages, moving in, moving through, and moving out, to demonstrate Craig's transition from an engineer to a social entrepreneur in terms of both experiencing and meaning making. The themes are displayed within each phase that reveal the interplay between the moving context (situation), personal meaning (self), relational resources (support), and action-oriented responses (strategy). It is worth noting that not all four elements of Schlossberg's 4S system, situation, self, support, and strategy, emerged with equal prominence in every transition phase. Because the analysis was driven by Craig's own narrative and meaning-making, certain elements were more salient at particular stages. For example, support did not surface as a distinct theme during the moving-in phase because Craig was acting largely on his own at that point, whereas it became central during moving through. Rather than forcing each element into every phase, we present the themes as they naturally emerged from the data, which we believe better preserves the authenticity of the narrative. The subthemes within each phase are not necessarily presented in the same order for a better flow of the story itself rather than consistency across sections.

### 5.1. Moving In: Encountering the Problem and Reframing Engineering Purpose

When Craig first described his transition, he shared his entry into social entrepreneurship developed through sustained community engagement, critical reflection on his assumptions as an engineer, and an increasing recognition of unmet social needs.

#### Situation: Living the Problem

Craig traced the beginning of his transition back to the days he was a Peace Corps volunteer. His living within a rural community brought him directly to the daily problems of infrastructure and health. Craig encountered the water problem through his own experience, as he and other members of the community repeatedly became sick. This total involvement influenced the way he saw the problem and the degree of his responsibility in solving it. He said, "I was a Peace Corps volunteer after college. That's really got me into this whole opportunity." "And I

got sick a lot while I was living in… I lived in a rural community in [Country X]."

A crucial instant happened when Craig came to the conclusion that one of the main assumptions that piped water is safe was wrong. When the water was tested, contamination was found, which, according to Craig, was an "aha moment" that led to a change in both the problem and his function as an engineer. He said, "I made the assumption that water that was piped is clean water. I mean, it looked clear, you know, and it was, coming out of a pipe, so I assumed that it was clean." But Craig shared that this assumption was later disrupted through investigation:

"I got curious, and I went and got a town plumber. Who… we walked from my tap outside of my home, we walked to the main road, there was a main pipe, and we followed about 2 kilometers up towards the mountain, and got to the area where the pump was, the water source, and realized there's a large field of cattle grazing around. So I figured then the water would be contaminated."

After testing the water, Craig stated plainly: "It was."

This moment marked what Craig described as a realization that extended beyond himself. He said, "That was an assumption that our whole community, many, most of the country, is making."

**Self: Awakening Social Responsibility Through Engineering Identity**

In addition to his problem recognition, Craig also mentioned a rather early feeling of being out of breath with the traditional engineering career paths. He narrated with the help of international studies and senior design projects how he developed a wish that the use of his technical background would be aimed at the wider society instead of the usual corporations. "I was getting sick a lot. Everyone, there's a problem, so I wanted to fix it. I wanted to fix it for my community members."

He also emphasized that his interest in technology shaped how he responded: "I have a knack or an interest in technology."

This combination of personal experience and technical inclination set the foundation for his early identity shift toward socially oriented engineering work.

**Strategy: Early Experimentation with Multiple Technologies**

Instead of immediately launching a venture, Craig participated in a series of technical small-scale developments, which comprised stoves, irrigation systems, and solar power. He then gradually and strategically focused his attention on water, recognizing it as the most impactful health and scalability solution. He said:

> "Everything from a low-cost oven using a metal barrel, drip irrigation systems. Nothing is revolutionary, brand new, but really, I was able to take ideas and designs and localize it. So, drip irrigation systems. They've been around for many years. With the drip tape, but, like, how do you get it set up? What kind of tools are we using? What kind of filters are we needing? I

> basically created designs locally, so we used a metal barrel that we can find locally, build up on stands using, you know, cutting logs and trees, and then using, like, a sock filter to filter, and then putting into the ground. So made, like, kits. So then farmers could buy these kits for drip irrigation. The ovens using a metal barrel, stove, improved stove design to improve, smoke, you know, reducing smoke in in-house smoke or indoor smoke, pollution, as well as optimizing, you know, fuel usage. And getting and localizing, so solar panels, that was more just helping install and design systems for rural homes."

This process reflects an exploratory phase where Craig developed the solution iteratively rather than instantaneously. Over time, he intentionally narrowed his focus: "across the portfolio of these 5 products that I was working in, the technology solutions honed in on the water, because that's the one that we were the most… we had the best, potential to scale, and help the most people."

### 5.2. Moving Through: Learning, Uncertainty, and Venture Development

As Craig progressed through the transition, his narrative emphasized iteration, uncertainty, and the growing realization that technical expertise alone was insufficient.

#### Strategy: Iterative Prototyping and Field-Based Learning

Craig repeatedly emphasized prototyping as a key element of his learning process. He talked about the production of several prototypes using cheap, local materials and about improving them by taking the opinions of the neighborhood into account. One of the basic teachings, called the "donkey factor," showed how solutions that seem to be good on paper could not work in the real world. Craig repeatedly highlighted prototyping as central to his process: "Prototypes. We made… I made a lot of prototypes." He emphasized affordability and local availability he tried to ensure throughout the process: "Try to be as cheap as possible, as locally available."

Craig also described how he gathered continuous feedback from community members: "So as soon as I would design it, I'd put it through the test. And how we, like, if it worked, what they liked about it, what they didn't like about it, and… and then I would iterate again." He continued to say: "came back the next day, and noticed that the valve was knocked over. We asked around what's going on, and the neighbor said, oh, a donkey went by, brushed by, and it knocked it off."

Reflecting on this, Craig concluded: "no matter how it looks in, you know, on the design or on paper, like, getting out in the field and testing it is super critical." This experience reinforced the necessity of field-based iteration and humility in design.

#### Situation: Confronting the Limits of Technical Solutions

A significant transformation took place when Craig concluded that technical efficiency by itself was not sufficient for a product to be adopted or reach a large scale. He articulated his annoyance when he found out that even the best working solutions still needed to have delivery systems, training, pricing models, and maintenance structures put in place. "I figured if I designed the best

technology, it would just work, it would spread."

He later realized this assumption was incorrect. He said: "I very quickly learned the hard way that's not the case."

This realization introduced a new challenge: "How do you get it in the hands of the people that need it? Through what model?"

This realization marked a shift from engineering-centric thinking toward venture-oriented problem framing.

**Support: Mentors, Networks, and Accelerators**

Craig, who did not have any formal business training, turned to mentors, pitch competitions, and accelerators for help in getting through the hard and new business world. He kept on saying that mentorship was important, pointing out that the advisors played a role in fine-tuning his business model, making propositions of value, and having strategic clarity. He said, "Mentors, mentors, mentors."

He also explained how pitch competitions functioned as learning spaces: "so even just going through the competition was helpful. We have to list out our competitors." Then he also emphasized follow-up relationships: "maybe judges that, like, had really good things to say that we, like, I would follow up with."

Later, he also mentioned accelerators played a key role. He said: "It was really helpful, and I think it's just… we then went through an accelerator, so I can, actual, Business Accelerator, again, tremendously valuable."

**Self: Balancing Dual Professional Roles**

During this period, Craig shared his experience of juggling a full-time job as an engineer with providing leadership for the venture, taking advantage of nights and weekends for fundraising and running the operations. This double position brought about personal stress and made it difficult for him to give the organization his full commitment until it became stable enough. He said: "So then I actually went back and went into [engineering job], you know, in the normal corporate life. And use my nights and weekends of time to run the organization."

This arrangement continued for several years for Craig. A turning point came when personal circumstances changed:

> "once I was close to, having my first kid, realized the time would go… my nights and weekends now are dedicated to the kid, and so I have a full-time 40-hour, 50-hour-a-week job during the day, and then, you know, what I was spending time doing *COMPANY A*, So that was the switch, and that was actually [year], right when, decided to jump in full-time to be the CEO, because I couldn't take the time… I didn't have the… I lost all the free time I had in the nights and weekends."

This led to his full transition.

### 5.3. Moving Out: Identity Consolidation and Mission-Driven Leadership

By the later stage of his transition, Craig articulated a stable identity as a social entrepreneur and organizational leader, rather than solely as an engineer.

#### Situation: Redefining Innovation

Craig questioned the traditional understanding of innovation, maintaining that the newness of technology was not the only aspect of its impact. He pointed out that simplicity, relevance, and the way the service was delivered were more important than high-tech solutions and that the organization's most progressive input was the innovation of monitoring systems, service model, and foundations of support over a long period. He said, "Innovative is in the eye of the beholder."

He described his technology as innovative despite its simplicity: "it doesn't have any fancy gadgets, it doesn't have any computer programs, but I would actually say, like, it is very innovative in the sense that it uses what it… it's designed so appropriately and so simple."

Over time, he reframed innovation as services they can provide: "our innovative component to our whole model is not the technology, it's the services around it."

#### Self: Leadership Through Focus

Craig characterized his position as a transition from creating solutions to guiding, making strategic choices, and harmonizing the objectives of the organization. He pointed out focus as the key lesson learnt, stating that the company only scaled up efficiently after confining its mission to water only. He said: "we really only became successful once we really started focusing on, on a solution."

However, he also reflected on the difficulty of narrowing the scope: "You know, and I thought, like, why cut out these four other products that have really cool impact?" Yet he concluded: "but then now we've gone so deep. We are total experts, everybody comes to us for what we know about this."

#### Strategy: Standards and Mission Alignment

As the organization expanded across multiple countries, Craig narrates the specification of quality thresholds and performance indicators. The expansion was allowed only under the condition that the minimum service and water quality standards were met. He said: "We must have this many visits per week, per month, or per quarter, per community. We must show this high of high-quality water results."

Therefore, growth was conditional: "We can grow as fast as we can, as long as we maintain this."

Craig described situations in which the reasoning of the investors clashed with the values of the organization in particular, the choice to pull out of areas that were in higher need but were not so profitable. These times made his character as a mission-oriented leader stronger, who prioritized social good over mere financial considerations. He illustrated: “And the question from the investor was, why… why don't you cut [Country X]?”

Despite financial logic, Craig emphasized mission alignment as a priority: “And again, we took the decision internally as a core mission value that we want to maintain operations.”

## 6. Discussion

This study aimed to understand how an engineer transitions from a technical professional into a social entrepreneur through founding a technology-based social venture. The study particularly examined the triggering contextual conditions, the resources that were personal and relational, and the evolution of Craig’s professional identity as he moved through the transition and took up the role of a leader.

Craig's experience during the moving-in phase strongly corresponds with Schlossberg's concept of situation, for his exposure to water insecurity came not from witnessing social problems from a distance but from living in a community that faced such shortcomings. This result validates earlier findings that engineers’ involvement in social entrepreneurship often comes about because of experiential encounters that not only challenge technical assumptions but also reframe problem definitions [11], [15].

During the transition, Craig's self-strategy interaction was given attention. According to Schlossberg's theory, the self-aspect consists of the personal qualities and the interpretation of the transition that the individuals offer. Craig's account stressed the elements of patience and an ever-growing understanding of the limitations that technical expertise might impose. From the tactical standpoint, Craig reconsidered his migration as a learning process and drove it with prototyping, experimentation, and adaptation in real-world situations. This iterative process resembles the results obtained from research in engineering education that gives importance to learning through failure, field testing, and stakeholder engagement as major factors for socially responsive engineering practices [14].

One of the most revealing moments in Craig's story was his realization that technical knowledge alone was not sufficient for sustaining and scaling his social venture; It was not enough for the impact to last. Craig, as the change took place, increasingly turned to support systems, mentors, incubators, pitch competitions, and professional networks for knowledge and skills in business and organizational leadership that he lacked and was thus unable to acquire. It is worth mentioning that Craig was not temporarily dependent on mentorship; rather, it continued long into the moving-out stage, which implies that support systems are still crucial even after the identity has been solidified.

During the moving-out phase, Craig manifested a solid identity as a social entrepreneur and a leader of the organization. He shifted the discussion of the innovation from the technological

novelty to service delivery, systems, and impact, which proved the deep integration of engineering and social purpose. Such identity consolidation goes hand in hand with Schlossberg's interpretation of transitions as processes that end up creating new roles, routines, and beliefs. Through Craig's story, we see that social entrepreneurship is not only a career change but also a transformation in the way engineers see impact, responsibility, and professional success.

## 7. Limitation

This study has several limitations. One limitation is that Craig's story represents only one route for engineers to be social entrepreneurs; it is the journey of a mechanical engineer who started a water-based social enterprise and grew it in Central America, and the stories can be significantly different for other engineers. Even so, this study acknowledges the power of narrative inquiry and Schlossberg's Transition Theory as a duo of complementary instruments for peeling through the complexities of professional transitions. By giving priority to the lived experience of Craig, this study enriches the readers with a subtle understanding of the way engineers assign meaning to their long-term career transformations. Researchers of the future could further investigate numerous narratives with individuals from different disciplines and types of businesses, thereby creating a basis for comparison and synthesis across the cases.

## 8. Conclusion

This narrative study offers a comprehensive illustration of how an engineer not only lived through but also interpreted the transition from being a technical professional to a social entrepreneur via the creation of a technology-based social venture. The application of Schlossberg's Transition Theory to the study reveals that this transition process takes place through interconnectedness of phases of moving in, moving through, and moving out, and is dependent upon evolving interaction of situational exposure, personal meaning-making, relational support, and strategic action.

Through Craig's story, it becomes evident that engineers are likely to become social entrepreneurs not by setting predefined goals, but by going through processes of transformation that shake up their technical beliefs and widen their view of social responsibility. His transition emphasizes the role of several factors in shifting to a new identity that may not always be highlighted in formal engineering education, such as experiential learning, iterative problem-solving, mentorship, and long-term identity negotiation. The results imply that it is not enough to provide engineers with technical training only; rather, it is important to have educational and professional environments that give room for reflection and continued engagement with communities in preparing engineers for socially impactful careers.

Ultimately, Craig's story provides insight into the multifaceted nature of engineers' transitions into social entrepreneurship. While his journey is unique, it helps to comprehend the widespread difficulties, aids, and changes in personality that might be typical for other transitions. This study is the first move towards building a deeper, more humane perspective of how engineers turn their technical skills into lasting social impact via entrepreneurial acts. Engineering educators may introduce this story in their classroom to show how engineers can pursue a career that is socially

meaningful and impactful.

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