

## Generation Z Talent Attraction in Engineering SMEs Case Study: Intekno

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**Keywords:** *Generation Z, Talent Attraction, Engineering SMEs, Employer Branding, Recruitment Strategy, Qualitative Case Study.*

**Abstract:** *Engineering small and medium-sized enterprises (SMEs) play an important role in supporting industrial development, yet many continue to face difficulties in attracting Generation Z talent. Differences in work expectations, communication preferences and perceptions of fairness often create a gap between what SMEs offer and how these offers are perceived by young job seekers. This challenge is particularly visible in engineering SMEs, where recruitment practices are frequently informal and driven by operational urgency.*

*This study examines how recruitment practices in an engineering SME shape Generation Z's perception of employer attractiveness and explores how these practices can be improved through a more systematic approach. A qualitative case study was conducted at Intekno using self-observation, semi-structured interviews and internal document review. Data triangulation was applied to strengthen validity and to identify consistent patterns across multiple sources.*

*The findings show that Generation Z candidates evaluate recruitment experiences based on digital communication, clarity of process, perceived fairness, learning opportunities and organizational purpose. Although engineering SMEs inherently offer hands-on learning, close mentorship and early exposure to real projects, these strengths are often not communicated clearly during recruitment. Informal processes, slow responses and limited employer visibility were found to reduce trust and weaken employer attractiveness. This study contributes to the literature by extending Generation Z recruitment research into the context of engineering SMEs and offers practical insights for managers seeking to improve recruitment effectiveness without complex human resource systems.*

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## **Introduction**

Generation Z represents the first cohort to enter the labor market having grown up entirely within a digitally mediated environment. As digital natives, their daily interactions with institutions, organizations and individuals are shaped by instant access to information, continuous online connectivity and real-time feedback mechanisms. These characteristics strongly influence how Generation Z evaluates potential employers, including expectations regarding communication speed, transparency and accessibility during recruitment processes (Schroth, 2019; Bennett & Lemoine, 2022).

Previous studies consistently show that Generation Z places high importance on digital responsiveness and clarity when engaging with organizations. Recruitment experiences that involve delayed responses, unclear instructions or fragmented communication are often interpreted as indicators of weak organizational capability or low employer commitment. Deloitte (2023) reports that Generation Z candidates are more likely to disengage from recruitment processes when communication lacks structure or timeliness, regardless of the attractiveness of the job role itself. This suggests that recruitment communication functions not only as an informational tool but also as a signal of organizational professionalism.

Transparency and fairness also emerge as core work values for Generation Z in the digital era. Having been exposed to open information flows through social media and digital platforms, this generation expects clear explanations of recruitment stages, selection criteria and outcomes. Research by Wood (2021) indicates that Generation Z exhibits lower tolerance for ambiguity in institutional interactions, particularly in high-stakes situations such as job selection. When recruitment processes are perceived as unclear or inconsistent, candidates may associate the organization with unfairness or disorganization.

Another defining characteristic of Generation Z's work orientation is the search for purpose and meaningful contribution. Unlike earlier generations that emphasized job security or hierarchical advancement, Generation Z increasingly evaluates employers based on value alignment, ethical orientation and societal impact (Schroth, 2019). During recruitment, candidates often seek narratives that connect technical tasks with broader organizational or industrial contributions, especially in sectors such as engineering where outcomes are not always visible to the public.

Learning and development opportunities further shape Generation Z's employment expectations. Prior research shows that Generation Z prefers experiential learning, mentorship and early exposure to practical work rather than delayed or purely theoretical training programs (Bennett & Lemoine, 2022). This preference reflects the rapid pace of technological change, which requires continuous skill development and adaptability. Consequently, recruitment messages that highlight learning pathways and professional growth tend to resonate more strongly with this cohort.

Digital environments also accelerate the formation of employer perceptions. Generation Z candidates often assess organizations before submitting applications by reviewing digital footprints, online presence and social media activity. Deloitte (2023) emphasizes that early digital impressions significantly influence whether candidates choose to apply, continue or withdraw from recruitment processes. This reinforces the idea that recruitment represents an early evaluative experience rather than a neutral administrative step.

Taken together, these studies suggest that Generation Z evaluates recruitment through a combination of digital communication quality, perceived fairness, purpose alignment and learning opportunity. These expectations form the foundation for understanding why engineering SMEs, despite offering hands-on learning and meaningful work, often struggle to attract young talent. This gap between organizational reality and applicant perception highlights the importance of examining recruitment practices as strategic signals, which forms the focus of this study.

Engineering organizations operate in a work context that is structurally different from service-based or consumer-facing industries. Engineering roles are typically characterized by standardized procedures, safety requirements, technical precision and strong dependence on teamwork and coordination. As a result, recruitment in engineering contexts often places greater emphasis on competence, discipline and reliability compared to other sectors. These characteristics shape not only job design but also how recruitment processes are perceived by potential candidates, particularly those entering the workforce for the first time (Armstrong & Taylor, 2020; Boxall & Purcell, 2016).

For Generation Z, this technical and rule-based environment creates a unique tension between the desire for structure and the expectation of flexibility. Prior studies suggest that young engineers seek clarity in roles and procedures while simultaneously valuing autonomy, rapid learning and personal development (Noe, 2020). This dual expectation means that recruitment practices in engineering firms must balance formal structure with signals of learning opportunity and support. When recruitment communication fails to reflect this balance, candidates may perceive engineering organizations as rigid or unattractive, even when the actual work environment offers meaningful development.

Small and medium-sized enterprises (SMEs) in the engineering sector face additional challenges in recruitment compared to large corporations. Engineering SMEs often operate with limited financial resources, lean organizational structures and minimal formal human resource systems. Recruitment responsibilities are frequently handled by founders, technical managers or administrative staff who perform multiple roles simultaneously (Edwards & Ram, 2014). As a result, recruitment processes in SMEs tend to be informal, reactive and highly dependent on personal judgment rather than standardized procedures.

While informality allows SMEs to respond quickly to operational needs, it can also generate unintended negative signals during recruitment. Research on SME human resource management indicates that informal recruitment practices may reduce transparency and consistency, which can affect applicant trust and perceived fairness (Harney & Dundon, 2017). For Generation Z candidates who are accustomed to structured digital interactions, such informality may be interpreted as a lack of professionalism or organizational readiness. This misinterpretation occurs even when SMEs offer high-quality learning environments and close mentorship.

Employer visibility represents another structural challenge for engineering SMEs. Unlike large organizations with established employer brands, SMEs often lack dedicated resources for employer branding and digital outreach. Recruitment communication is commonly limited to local networks, referrals or messaging platforms, which restricts exposure to broader talent pools (Backhaus & Tikoo, 2004). Consequently, many Generation

Z candidates are unaware of employment opportunities in engineering SMEs, particularly those located outside major urban centers.

Despite these challenges, prior research also highlights several inherent strengths of engineering SMEs that align closely with Generation Z preferences. SMEs typically offer closer interaction with senior engineers, faster decision-making and early involvement in real projects. Studies on learning and development in SMEs suggest that such environments provide rich experiential learning opportunities that are difficult to replicate in larger, more hierarchical organizations (Noe, 2020). However, these strengths are often embedded in daily operations and are rarely articulated explicitly during recruitment.

The mismatch between the actual work environment of engineering SMEs and how it is communicated during recruitment creates a critical perception gap. Generation Z candidates may overlook SMEs not because of limited career prospects but because recruitment signals fail to convey the organization's learning potential, purpose and professionalism. Prior studies on recruitment signaling emphasize that applicants rely heavily on early-stage cues to evaluate employer attractiveness, especially when direct organizational knowledge is limited (Spence, 1973; Collins & Stevens, 2002).

Most existing research on Generation Z recruitment focuses on large corporations or general service industries, with limited attention to engineering SMEs. Studies tend to examine generational preferences, employer branding or recruitment practices as separate issues, rather than integrating them within a specific industrial and organizational context. As a result, there is a lack of empirical understanding of how recruitment signals function within engineering SMEs and how these signals shape Generation Z attraction.

This study addresses this gap by examining recruitment practices in an engineering SME through the lens of Generation Z expectations and recruitment signaling. By integrating insights from interviews, internal documents and longitudinal self-observation, the study explores how recruitment processes communicate organizational values, learning opportunities and professionalism to young applicants. In doing so, the research contributes to a more nuanced understanding of talent attraction in engineering SMEs and provides practical insights for organizations operating under resource constraints.

Based on the discussion above, it is evident that recruitment challenges faced by engineering SMEs in attracting Generation Z talent are not solely driven by compensation or job availability. Instead, these challenges are closely linked to how recruitment processes signal organizational values, learning opportunities, fairness and professionalism to prospective applicants. While engineering SMEs often possess intrinsic strengths that align with Generation Z preferences, such as hands-on learning and close mentorship, these strengths are frequently under-communicated or obscured by informal recruitment practices and limited digital visibility.

This study aims to examine how Generation Z interprets recruitment practices within the context of an engineering SME and how these interpretations influence their attraction or disengagement during the hiring process. By focusing on recruitment as a signaling mechanism, the study shifts attention from traditional employer branding narratives to the early-stage interactions that shape applicant perceptions. The research specifically explores how digital communication, transparency, learning orientation, purpose alignment and employer visibility function as recruitment signals in an SME environment.

The contribution of this study is twofold. From a theoretical perspective, it extends recruitment signaling and employer branding literature by situating Generation Z attraction within the underexplored context of engineering SMEs, where informal HR practices and resource constraints are common. From a practical perspective, the study provides actionable insights for engineering SMEs on how to translate their existing strengths into clear and credible recruitment signals without requiring extensive investment in formal HR systems or branding infrastructure.

To achieve these objectives, the study adopts a qualitative research design using semi-structured interviews, internal document analysis and longitudinal self-observation. The Gioia methodology is employed to systematically transform empirical data into higher-level theoretical insights while ensuring analytical rigor and transparency. Through this approach, the study seeks to bridge the gap between generational expectations and organizational recruitment practices, offering a structured understanding of how engineering SMEs can enhance their attractiveness to Generation Z talent.

Based on this research gap, this study addresses the following research questions:

- 1) How can a planned and systematic recruitment process be designed to replace intuition-driven hiring practices in engineering SMEs when attracting Generation Z talent?
- 2) What assessment elements are required within a systematic recruitment process to ensure fairness, clarity, and alignment with both technical competence and organizational values for Generation Z candidates?
- 3) How should candidate sourcing and communication channels be integrated into a systematic recruitment process to improve employer visibility and engagement among Generation Z in an engineering SME context?

This study contributes to the recruitment and human resource management literature in three ways. First, it positions recruitment as a strategic upstream function that directly influences behavioral alignment and organizational performance, extending prior recruitment models that focus primarily on administrative efficiency. Second, it integrates cultural fit and technical competence into a single value-based recruitment framework, offering a practical response to the behavioral expectations of Generation Z. Third, by drawing on an in-depth qualitative case study of an engineering SME, this research provides empirical insights from a context that remains underrepresented in existing Generation Z and recruitment studies. From a practical perspective, the study offers an implementable recruitment framework that supports hiring consistency, fairness and long-term workforce sustainability in SMEs.

## Research Method

This study used a qualitative case study technique to investigate how engineering SMEs might increase their attractiveness to Generation Z candidates. A qualitative approach is appropriate since the research examines perspectives, communication methods, behavioral tendencies, and organizational routines that cannot be sufficiently captured by numerical metrics alone. Recruitment experiences are subjective, socially constructed, and shaped by the contextual circumstances inherent in small engineering firms. The case study method allows the researcher to thoroughly examine these dynamics and develop a contextually informed understanding of the attraction process as it occurs in real organizational settings.

This study is situated inside Intekno, a small to medium-sized engineering firm specializing in machining, fabrication, hydraulic systems, and technical field support. The firm exhibits organizational characteristics typical of Indonesian engineering SMEs, including streamlined structures, multi-tasking employees, no formal HR infrastructure, and recruitment practices aligned with current project requirements. This context provides insight into Generation Z's reactions to SME recruitment signals and the perceptions of SME leaders on the expectations of other generations.

The target population includes those engaged in or influencing recruitment decisions within engineering SMEs, as well as early career professionals who directly undergo the recruitment process. A purposeful sampling strategy was used to ensure the inclusion of diverse perspectives from various organizations. The SME co-founder, the HR officer, an administrative staff member, and a recently hired Generation Z technician were selected due to their direct involvement in the recruiting process. This combination provides a comprehensive perspective from managers, administrators, and workers. Despite the limited sample size, this arrangement adheres to the criteria for qualitative case studies, which prioritize depth of understanding. The researcher determined that topic saturation was achieved when no more ideas emerged throughout subsequent rounds of data collection and first coding.

Three distinct methodologies were used to collect data, facilitating the triangulation of findings and enhancing the study's credibility. The first source was self-observation. The researcher, serving as a recruitment manager from 2019 to 2025, documented applicants' interactions, and communication styles, reactions to the hiring process, and internal decision-making procedures inside the organization. These studies demonstrated latent information that is often not explicitly captured inside SMEs. To alleviate potential researcher bias, a reflective notebook was used throughout the experiment to record personal assumptions and judgments. This reflexive mechanism enabled the distinction between observable organizational developments and subjective managerial impressions.

The secondary data source included semi-structured interviews. Interviews were conducted in person to elicit detailed narratives including recruitment expectations, communication challenges, company culture, and perceptions of equality. The interview guide was founded on studies about factors that make a job engaging, generational work preferences, and the ways individuals communicate signals. Nonetheless, the inquiries were open-ended, allowing participants to articulate their experiences in their own words. The interviews were recorded, transcribed, anonymized, and lasted between forty-five and sixty minutes. The SME co-founder provided strategic counsel on recruiting goals and constraints, whilst the HR officer addressed operational procedures and challenges. The administrative staff member addressed issues about coordination and communication, while the Generation Z technician provided a personal perspective on the applicant's path, expectations, and adaptations.

The third data source included paperwork from the organization related to recruitment. These included employment advertisements, communication records, internship agreements, screening notes, internal standard operating procedures, and email correspondences. Document analysis corroborates insights gained from interviews and observations. It also shown that formal procedures and actual actions do not consistently align, a prevalent issue for small and medium-sized enterprises (SMEs). For example, several employment advertisements emphasized technological skills but omitted any information on

how to cultivate them. Furthermore, communication records revealed that response times fluctuated according on the individual's level of busyness.

The data analysis used a systematic and iterative coding strategy based on the Gioia methodology. The research started with open coding of interview transcripts, observational notes, and organizational documents to identify first-order codes that precisely reflect participant expressions and observed actions. Subsequently, these descriptive codes were synthesized into second-order themes representing broader concepts. This stage revealed topics such as expectations for digital communication, concepts of justice, a need for experiential learning, and issues related to employer visibility. The next phase included consolidating these concepts into broader categories that illustrated Generation Z's attraction to engineering SMEs. This three-step coding framework elucidates the transformation of raw data into concepts.

To enhance the study's trustworthiness, several qualitative rigor methodologies were used. The credibility was enhanced by triangulation of three data sources and the use of member checking, in which participants were asked to confirm the accuracy of interview summaries. The reliability was enhanced by the methodical documentation of the coding process and the maintenance of an audit trail that included annotations on coding decisions and analytical reflections. The reflective journal enhanced confirmability by aiding the researcher in monitoring potential biases. Comprehensive information of the organizational context facilitated transferability by enabling readers to determine the applicability of the findings to other similar engineering SMEs.

Throughout the whole research process, ethical considerations were rigorously prioritized. All participants in the study were informed of its purpose, advised that participation was voluntary, and notified that they might withdraw at any time without consequence. To safeguard privacy, all transcripts and documents have had personal information expunged. The researcher could only access encrypted digital directories where data files were securely stored. The study complied with ethical standards by involving little risk and concentrating on organizational processes rather than sensitive personal data, along with established qualitative research methodologies.

A conceptual framework specifically developed for this study supports the methodological approach. The framework illustrates the interrelation between generational expectations, organizational inputs, job position requirements, and the development of a recruitment strategy. The work practices of Generation Z and their values about employees exemplify external influences. Company values, culture, and job role specifications exemplify internal inputs. These inputs converge to form a cultural fit assessment matrix that assists the company in discerning its expectations from applicants and the candidates' expectations from the organization. The matrix assists the firm in determining hiring and recruitment strategies, which then influences the selection of recruiting channels and the organization's ability to attract appropriate candidates. The framework provides a systematic arrangement of the research variables and facilitates the analytical process of the investigation.

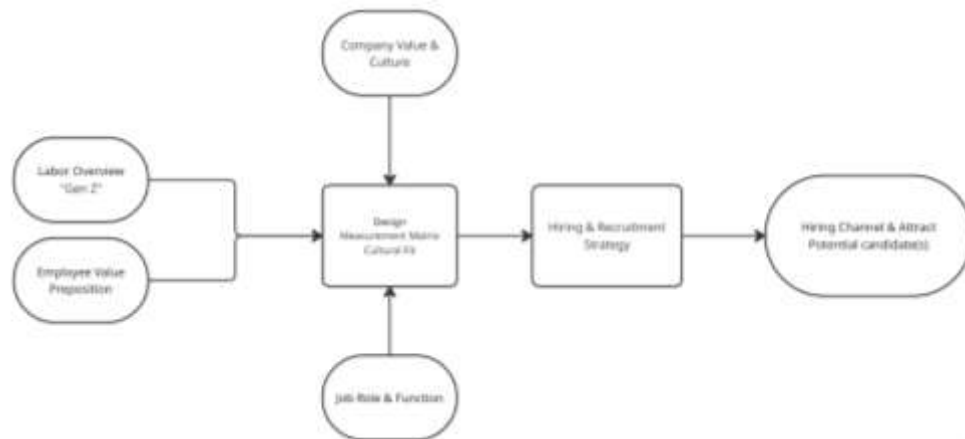


Figure 1. Conceptual Framework

This analytical method ensures that the outcomes authentically reflect true organizational conditions and include the viewpoints of both managers and young applicants. The study provides a comprehensive understanding of how engineering SMEs may develop recruiting strategies that correspond more closely with the tastes and expectations of Generation Z by using several sources of data, a systematic coding methodology, and an integrated conceptual framework.

## Results and Discussion

The results of this study are derived from the triangulation of three qualitative data sources: semi-structured interviews, internal recruitment-related documents and longitudinal self-observation conducted by the researcher. Interview data served as the primary source for capturing Generation Z candidates' perceptions and experiences during the recruitment process. Internal documents provided institutional evidence of recruitment practices and communication patterns, while self-observation was used to contextualize how these practices evolved over time within the engineering SME

### Results

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The analysis identified six recurring themes that explain how Generation Z evaluates recruitment experiences in engineering SMEs. These themes include digital expectations, purpose alignment, learning orientation, fairness and transparency, employer visibility, and the inherent strengths of SME work environments. The themes emerged consistently across interview narratives, document analysis, and observational records, indicating a strong convergence of evidence. Table 1 presents a summary of these themes, their descriptions, and representative empirical evidence.

Table 1. Summary of Key Themes in Gen Z Attraction to Engineering SMEs

NO	THEME	DESCRIPTION	EVIDENCE
1	Digital Expectations	Gen Z evaluates employers through online presence, responsiveness, and digital communication.	Candidates disengaged when communication was slow or unclear.
2	Purpose Alignment	Gen Z seeks workplaces with meaningful contribution and ethical values.	Applicants asked about mission, purpose, and public impact.
3	Learning Orientation	Gen Z prioritizes hands-on learning, mentorship, and clear development paths.	New hires valued practical exposure over administrative tasks.
4	Fairness & Transparency	Gen Z prefers structured, predictable recruitment processes.	Informality was perceived as inconsistency or unfairness.
5	Employer Visibility	Limited channels reduce SME visibility to urban Gen Z applicants.	Job ads mostly circulated via local networks and WhatsApp.
6	Natural SME Strengths	SMEs offer fast learning, mentorship, impact visibility, and flat culture.	Observed through projects and technician feedback.

*Source: Author's Analysis (2025)*

Digital expectations emerged as a dominant theme across interview data and were reinforced by recruitment communication records. Generation Z candidates evaluated employers based on the speed of responses, clarity of digital communication, and ease of accessing recruitment information through online channels. Slow or ambiguous communication was frequently interpreted as a signal of weak organizational readiness or low employer commitment, even when job roles themselves were considered attractive.

This finding aligns with signalling theory, which suggests that applicants rely on observable recruitment cues to infer unobservable organizational qualities such as professionalism and reliability. Prior studies indicate that Generation Z places greater importance on digital interaction quality than previous generations, particularly during early recruitment stages. In engineering SMEs, limited digital infrastructure and informal communication practices amplified the negative impact of delayed responses, shaping applicant perceptions more strongly than intended by the organization.

Purpose alignment emerged as an important factor influencing Generation Z's attraction to engineering SMEs. Interview participants indicated a strong interest in understanding how the organization's activities contribute to broader outcomes such as industrial development, sustainability, or societal value. Candidates frequently asked about the company's mission, long-term direction, and the real-world impact of engineering projects during recruitment interactions.

However, internal recruitment documents revealed that job advertisements and vacancy announcements rarely communicated organizational purpose beyond technical role descriptions. As a result, applicants often struggled to connect engineering tasks with meaningful contributions, despite the organization's actual involvement in impactful projects. This disconnect reduced the perceived attractiveness of the organization during early recruitment stages.

Learning orientation was consistently identified as a key attraction factor for Generation Z candidates. Interview data show that young applicants prioritized opportunities for hands-on learning, mentorship, and early exposure to real engineering challenges over formal training programs or administrative onboarding activities. New hires emphasized that learning directly from experienced technicians and engineers was particularly valuable for building practical competence.

Self-observation further confirmed that engineering SMEs naturally provide experiential learning environments due to their project-based operations and close working relationships. However, these learning opportunities were rarely highlighted during recruitment communication and were often perceived by management as routine operational practices. Consequently, their potential role as attraction signals was underutilized before employment began.

Fairness and transparency emerged as critical criteria in how Generation Z evaluates recruitment processes. Interview participants frequently associated informal recruitment practices with unpredictability, particularly when selection stages, timelines, or decision criteria were unclear. Delayed feedback and vague interview outcomes were sometimes interpreted as indicators of unequal treatment or organizational disorganization.

Document analysis further revealed inconsistencies in recruitment documentation across hiring cycles, including variations in job requirements and selection procedures. These inconsistencies reinforced candidate concerns about fairness and process reliability. For Generation Z, transparency was perceived not only as an ethical expectation but also as a signal of organizational maturity and professionalism.

The findings further indicate that Generation Z evaluates recruitment not only through communication quality but also through how competence and cultural alignment are assessed. Structured interviews, task-based assessments, and observable learning trials emerged as preferred mechanisms because they provide clarity and perceived fairness. Rather than relying on subjective judgment, these assessment approaches allow engineering SMEs to evaluate technical capability and behavioral fit simultaneously, while also signaling professionalism to applicants. For Generation Z candidates, the presence of clear and observable assessment criteria strengthens trust in the recruitment process and reduces perceptions of bias.

Employer visibility was identified as a structural constraint affecting Generation Z attraction to engineering SMEs. Interview respondents noted that they rarely encountered SME job opportunities through mainstream digital platforms and often relied on personal networks or messaging applications for information. Internal documents confirmed that recruitment announcements were primarily distributed through limited local channels.

This limited visibility reduced the organization's exposure to wider applicant pools, particularly among urban and technically educated Generation Z candidates. The findings indicate that lack of visibility, rather than lack of opportunity, was a primary barrier preventing young applicants from considering engineering SMEs as potential employers.

The analysis also revealed several inherent strengths of engineering SME work environments that align closely with Generation Z preferences. These strengths include flat organizational structures, close interaction with senior staff, rapid skill development, and the ability to observe the direct impact of one's work. Interview data suggest that candidates who experienced these environments perceived SMEs as offering meaningful and engaging work experiences.

Self-observation indicated that these strengths were embedded in daily operational practices rather than formal HR policies. However, because they were treated as routine aspects of work, they were rarely articulated as part of recruitment messaging. As a result, these strengths remained largely invisible to potential applicants during the recruitment phase.

To strengthen the robustness of these findings, a frequency-based comparison across data sources was conducted. This analysis examined how consistently each theme appeared in interviews, observational records, and internal documents. The results of this comparison are presented in Table 2.

Table 2. Frequency of Emergent Themes Across Data Sources

Theme	Interview evidence	Observation evidence	Document evidence	Overall strength
Digital expectations	High	High	Medium	Strong
Purpose alignment	Medium	High	Low	Moderate
Learning orientation	High	High	Medium	Strong
Fairness & transparency	High	Medium	Medium	Strong
Employer visibility	Medium	Low	High	Strong
SME strengths	Medium	High	Medium	Strong

Source: Author’s qualitative coding (2025)

The frequency distribution shows that digital expectations and learning orientation were strongly supported across all three data sources. Fairness and transparency also emerged consistently, particularly in interview data. Employer visibility appeared most clearly in document analysis, indicating that visibility issues were structural rather than perceptual.

The analysis further revealed that recruitment challenges and opportunities often coexisted within the organization. While informal practices limited clarity and visibility, SMEs simultaneously possessed intrinsic strengths valued by Generation Z. Table 3 summarizes the relationship between these challenges and corresponding opportunities.

Table 3. Challenges and Opportunities for Gen Z Attraction in Engineering SMEs

Category	Challenge Identified	Opportunity Identified	Implication
Visibility	Limited online presence	Digital outreach is low-cost and high-impact	SMEs can broaden reach with minimal resources
Communication	Slow or unclear responses	Gen Z values fast, structured messaging	Improve professionalism via communication SOPs
Development	Lack of structured pathways	SMEs already offer hands-on learning	Formalise and highlight development routes
Culture	Perceived rigidity	SMEs have flat, collaborative cultures	Strengthen culture communication in branding
Recruitment Process	Informality reduces trust	Minimal structure enhances fairness	Adopt simple, transparent process steps

Source: Author’s Analysis (2025)

Overall, the results indicate that difficulties in attracting Generation Z candidates stem primarily from issues of visibility, communication, and recruitment structure rather than from fundamental organizational weaknesses. Many strengths valued by Generation Z already exist within engineering SMEs but are not effectively communicated during recruitment. These findings provide the empirical foundation for the Discussion section, which interprets the results and develops strategic implications for engineering SMEs.

## **Discussion**

This study demonstrates that Generation Z evaluates recruitment experiences as a holistic process shaped by digital communication, perceived fairness, learning opportunities, organizational purpose, and employer visibility. These dimensions do not operate independently, but rather interact to form early impressions of organizational credibility and employment value. The findings confirm that recruitment is not merely an administrative function, but an early signaling mechanism through which organizations communicate their values, professionalism, and growth potential to prospective employees.

Consistent with signaling theory, Generation Z applicants rely on observable recruitment cues to infer unobservable organizational qualities such as reliability, fairness, and developmental orientation. Digital responsiveness, clarity of information, and transparency in recruitment stages function as signals that shape applicant expectations long before formal employment begins. When these signals are weak or inconsistent, applicants may form negative perceptions regardless of the organization's actual capabilities. This helps explain why engineering SMEs, despite offering meaningful work and learning opportunities, struggle to attract Generation Z talent.

The findings indicate that digital expectations play a central role in shaping applicant attraction. Generation Z candidates interpret delayed responses or unclear digital communication as indicators of organizational inefficiency or low commitment. Prior research supports this interpretation, showing that digitally native generations place greater importance on communication speed and accessibility during recruitment (Sivertzen et al., 2013; Caliskan & Zhu, 2023). In engineering SMEs, limited digital infrastructure and reliance on informal communication amplify the negative effects of slow or inconsistent responses.

Purpose alignment also emerged as a significant factor influencing Generation Z attraction. The results show that young applicants seek to understand how their work contributes to broader organizational or societal goals. This aligns with prior studies suggesting that Generation Z places stronger emphasis on meaningful and purpose-driven employment compared to previous cohorts (Schroth, 2019; Deloitte, 2023). However, engineering SMEs often fail to articulate their industrial or societal contributions in recruitment materials, reducing applicants' ability to connect technical roles with meaningful impact.

Learning orientation represents another critical dimension of attraction. The findings reveal that Generation Z prioritizes hands-on learning, mentorship, and early exposure to real engineering problems over formalized training programs. This preference aligns with experiential learning theory, which emphasizes learning through direct experience and reflection, particularly in technical professions (Kolb, 1984; Noe, 2020). Although engineering SMEs naturally provide such environments, these opportunities are rarely communicated during recruitment, limiting their effectiveness as attraction signals.

Fairness and transparency in recruitment processes strongly influence Generation Z's trust in potential employers. Informal recruitment practices were frequently perceived as

unpredictable, especially when selection criteria or timelines were unclear. Recruitment justice literature suggests that procedural transparency significantly affects applicant perceptions of fairness and organizational legitimacy (Gilliland, 1993; Armstrong & Taylor, 2020). For Generation Z, transparency functions both as an ethical expectation and as a signal of organizational maturity.

Employer visibility emerged as a structural constraint rather than a perceptual issue. The findings show that limited digital presence and reliance on informal networks restrict SMEs' access to wider Generation Z talent pools. Employer branding research emphasizes that visibility is a prerequisite for attractiveness, particularly among digitally oriented job seekers (Backhaus & Tikoo, 2004; Mosley, 2014). Without consistent visibility, SMEs are excluded from the consideration set of potential applicants, regardless of job quality.

Importantly, the findings indicate that engineering SMEs possess several inherent strengths that align closely with Generation Z preferences. These include flat organizational structures, close interaction with senior staff, rapid skill development, and visible work impact. However, because these strengths are embedded in daily operations rather than formal HR systems, they remain largely invisible during recruitment. This creates a paradox in which SMEs offer highly attractive work environments but fail to communicate their value effectively.

To address this gap, the study synthesizes the findings into an eight-step Gen Z talent attraction process, as illustrated in Figure 2. The model explains how SMEs can translate internal strengths into external signals that are understandable and credible to Generation Z applicants. Rather than proposing complex HR systems, the model emphasizes gradual formalization, clear communication, and strategic visibility, which are feasible within SME resource constraints.

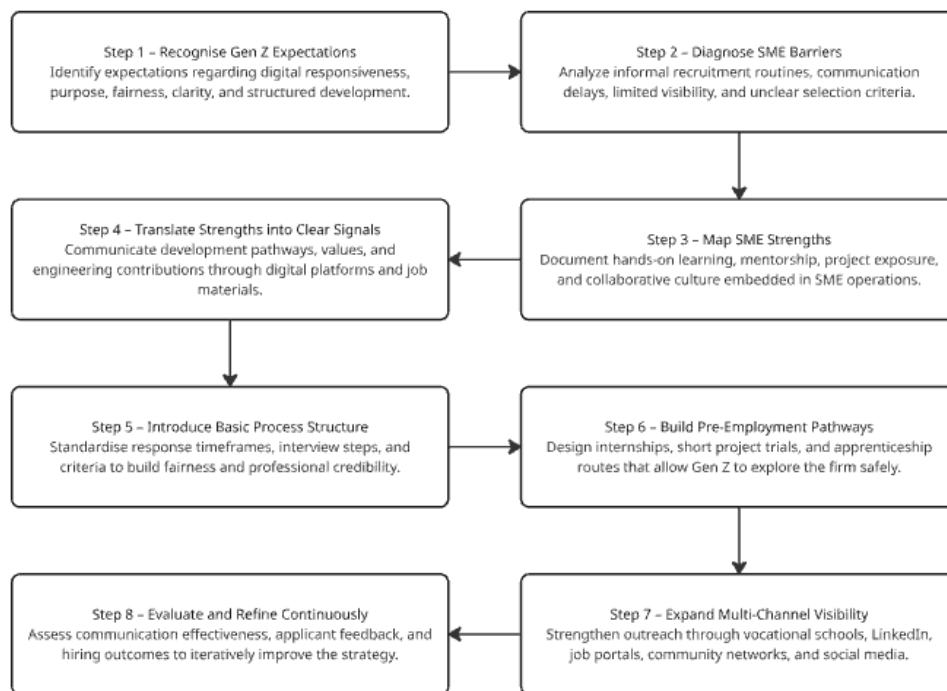


Figure 2. Sequential Flow of Gen Z Talent Attraction Strategy for Engineering SMEs

The eight-step process begins with understanding Generation Z expectations and identifying gaps between these expectations and existing recruitment practices. It then emphasizes recognizing intrinsic SME strengths and translating them into visible recruitment messages. Subsequent steps focus on introducing basic process structure, providing early exposure opportunities, enhancing employer visibility, and continuously improving recruitment practices. Together, these steps offer a practical roadmap for SMEs seeking to improve recruitment outcomes without extensive investment.

To provide a higher-level strategic interpretation, the findings are further organized into the Four-Pillar Gen Z Talent Attraction Model, presented in **Figure 3**. This model consolidates the empirical insights into four core strategic dimensions: purpose-driven employer branding, diversified sourcing, structured digital communication, and structured entry pathways. The pillars represent foundational principles, while the eight-step process operationalizes them in practice.



Figure 3. Four Pillars Talent Attraction Model

The first pillar emphasizes purpose-driven employer branding, highlighting the importance of communicating organizational mission and impact. The second pillar focuses on diversified sourcing to overcome visibility limitations and expand access to Generation Z talent. The third pillar underscores the role of structured digital communication in signaling professionalism and fairness. The fourth pillar highlights structured entry pathways that allow mutual assessment of fit before full employment.

Together, the eight-step process and four-pillar model demonstrate that recruitment effectiveness is shaped more by organizational behavior and communication than by firm size. Engineering SMEs do not need to replicate the branding or HR systems of large corporations to attract Generation Z talent. Instead, they must clarify their value, communicate consistently, and align recruitment practices with generational expectations.

This study contributes to the literature by extending recruitment signaling and employer branding theories into the context of engineering SMEs. While prior research has focused largely on large organizations or consumer-facing industries, this study shows how informal HR systems and limited visibility shape recruitment outcomes in technical SMEs. Practically, the findings provide engineering SMEs with a structured yet flexible framework for improving talent attraction in competitive labor markets.

## Conclusion

This study examines how Generation Z evaluates recruitment practices in engineering small and medium-sized enterprises (SMEs) and identifies factors that influence their attraction and disengagement during the hiring process. Drawing on triangulated qualitative evidence from interviews, internal documents, and longitudinal self-observation, the findings demonstrate that recruitment experiences function as early organizational signals rather than purely administrative procedures. The study confirms that Generation Z interprets recruitment practices as indicators of organizational values, professionalism, and long-term development opportunities.

In response to the first research question, the study finds that an effective recruitment process for engineering SMEs requires a clear and systematic sequence of steps. The proposed eight-step recruitment process shows that attraction improves when SMEs begin by understanding Generation Z expectations, recognize internal strengths, and translate these strengths into visible recruitment signals. Introducing basic recruitment structure, such as clear communication timelines and transparent selection stages, further strengthens applicant trust. Continuous evaluation ensures that recruitment practices remain aligned with evolving generational expectations and organizational capabilities.

Addressing the second research question, the findings indicate that recruitment effectiveness is strongly influenced by the quality of recruitment signals rather than by compensation or organizational scale alone. Generation Z candidates assess employers based on digital responsiveness, perceived fairness, learning orientation, and purpose alignment. These findings support signaling theory by demonstrating that observable recruitment cues shape applicant perceptions of organizational credibility and attractiveness. Engineering SMEs that fail to communicate learning opportunities and organizational purpose clearly are less likely to attract Generation Z talent, despite offering meaningful work environments.

With regard to the third research question, the study shows that limited employer visibility represents a major barrier to attracting Generation Z candidates. Recruitment practices that rely heavily on informal networks restrict access to broader talent pools, particularly among digitally connected job seekers. The findings indicate that diversified sourcing channels and consistent digital presence significantly improve organizational visibility and inclusion in applicants' consideration sets. Visibility therefore functions as a prerequisite for attraction rather than a supplementary recruitment activity.

The study contributes to recruitment and employer branding literature by extending signaling-based recruitment insights into the context of engineering SMEs. Unlike prior studies that focus primarily on large organizations, this research demonstrates how informal HR practices and limited communication infrastructure shape recruitment outcomes in technical SME environments. Practically, the study provides a structured yet flexible framework that enables engineering SMEs to improve recruitment effectiveness without extensive financial investment. By clarifying recruitment signals, strengthening communication, and aligning practices with Generation Z expectations, engineering SMEs can position themselves as credible and attractive employers in competitive labor markets.

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