

Designing A Cloud-Based Employee Recruitment Development for PT Sri Rejeki Isman Tbk using the Big Five Personality Model (OCEAN)

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ABSTRACT: Human resources are a strategic component that determines an organization's capacity to execute activities and achieve its goals. Ineffective recruitment may lead to "bad hiring," early turnover, and wasted time and cost. This study describes and analyzes the design direction for developing an employee recruitment approach at PT Sri Rejeki Isman Tbk by integrating the Big Five Personality Model (OCEAN) into a cloud-computing-based recruitment application. Using a descriptive-analytical qualitative approach (observation, interviews, and document study), the findings indicate that OCEAN can support more objective, transparent, and efficient selection by aligning candidates' personality profiles with job and organizational culture requirements. Cloud-based recruitment strengthens efficiency, effectiveness, flexibility, and centralized data governance through automated screening, online interviews, and structured evaluation. Key challenges include the availability of personality data, measurement accuracy, organizational capability to interpret OCEAN, candidate consent, and internal policies. The study concludes that a cloud-based platform integrating OCEAN can serve as an integrated online assessment system to support personality, competence, and motivation profiling within one recruitment ecosystem.

KEYWORDS: Recruitment, e-recruitment, Big Five Personality Model, OCEAN, cloud computing, online assessment, person-organization fit.

I. INTRODUCTION

Employees (human resources) are among the most critical components of a company because they enable organizational activities and the achievement of corporate goals. Human resources can be understood as a "source" of power derived from individuals who may be mobilized by an organization to accomplish its objectives [1]. In addition, human resources involve intentions, emotions, knowledge, motivation, work outputs, and reasoning capacity, all of which shape workplace behavior and performance [2]. Consequently, recruitment and selection are strategic functions that directly affect organizational effectiveness [3].

Recruitment outcomes may become costly when candidates exit early or do not match job demands and organizational culture. A report cited by Talentics (drawing on CareerBuilder) notes that a substantial proportion of new employees leave within the first six months after realizing the job is not a fit; the same source also highlights the vulnerability of recruitment processes to "bad hiring," which increases costs and turnover [4]. Similar concerns appear in public-sector contexts: Indonesian national reporting noted that a number of civil servant candidates (CPNS) resigned after passing selection, with reasons including compensation expectations and motivational issues [5]. These cases underline that beyond qualifications and experience, "fit"-including personality and work-style compatibility-can influence retention and performance.

Personality is often viewed as a meaningful predictor of how individuals behave in everyday life, including in the workplace [6]. As a practical implication, personality assessment may support organizations in evaluating candidate compatibility with job characteristics and organizational culture. The Big Five Personality Model-often labeled OCEAN-captures personality through five broad dimensions: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism [7], [8]. Meta-analytic evidence suggests that Big Five traits are associated with work-related outcomes, including job attitudes and performance indicators, supporting their relevance in personnel contexts [9].

At the same time, recruitment is increasingly supported by digital systems (e-recruitment), including web-based recruitment management, screening tools, and candidate evaluation modules [10], [11]. Cloud computing can further strengthen e-recruitment by providing scalable access, centralized data management, and flexible deployment without heavy local infrastructure [12], [13]. In this context, this study focuses on the research topic: "Designing Employee Recruitment Development at PT Sri Rejeki Isman Tbk Using the Big Five Personality Model (OCEAN) in a Cloud-Computing-Based Application." The central aim is to describe a one-platform recruitment design that enables more comprehensive candidate assessment-covering personality and related evaluative components-while improving process efficiency.

Designing A Cloud-Based Employee Recruitment Development for PT Sri Rejeki Isman Tbk using the Big Five Personality Model (OCEAN)

II. METODE

This study employs a descriptive-analytic approach designed to obtain information about the development design of a recruitment system integrating OCEAN within a cloud-based application environment. Descriptive-analytic research aims to provide a systematic, factual, and accurate description of facts, characteristics, and relationships among observed phenomena [14].

The research is framed as descriptive qualitative, focusing on actual conditions by means of observation, interviews, and document study. Descriptive research emphasizes presenting phenomena as they are and concentrates on current issues at the time of study [15]. In qualitative inquiry, the researcher is the primary instrument, and analysis proceeds through organizing and interpreting field data to derive coherent descriptions and meanings [16], [17]. Methodological references were used to guide data collection and interpretive analysis procedures in line with qualitative standards [18].

III. RESULTS AND DISCUSSION

A. Experience and Understanding of OCEAN- and Cloud-Based Recruitment

1) Depth of experience using the Big Five Personality Model (OCEAN) in recruitment

From the interview data, the informant emphasized several perceived benefits of using OCEAN in recruitment: (i) improving selection accuracy by supporting predictions of job performance, (ii) improving recruitment efficiency by filtering candidates more effectively, and (iii) improving decision transparency and reducing bias (S. S. Basuki, personal communication, Aug. 2023). The informant also described practical use cases across recruitment stages: early-stage CV screening, interview-stage probing aligned to relevant traits, and final-stage decision support through comparative OCEAN results.

Discussion. The Big Five model is widely used in personality psychology and personnel contexts as a framework for describing stable individual differences [7], [8]. The five traits-Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism-are commonly operationalized through standardized instruments and used in organizational research [7]. Evidence indicates that Big Five traits relate to work outcomes; for example, Big Five research has linked traits to job satisfaction and broader job-related behavior patterns [9]. In recruitment settings, OCEAN can help organizations assess whether candidate dispositions align with role requirements (e.g., creativity-oriented roles may benefit from higher Openness; reliability-oriented roles from higher Conscientiousness).

However, using personality testing requires caution. Organizations must consider (i) **validity** (whether an instrument measures the intended construct), (ii) **reliability** (consistency of results across time and conditions), and (iii) **fairness** (minimizing discriminatory impacts and ensuring ethical application). These considerations are consistent with general best practices in psychological measurement and applied assessment [8], [18].

2) Meaning of cloud-computing-based recruitment in the company context

The informant defined cloud-based recruitment as utilizing cloud technologies to manage recruitment end-to-end, including CV screening tools, online interviews, and centralized decision support modules (S. S. Basuki, personal communication, Aug. 2023). The emphasis was on speed, convenience, and the ability to run recruitment workflows without requiring physical co-location.

Discussion. Cloud computing can improve recruitment efficiency by reducing local infrastructure needs and enabling access to systems from various locations [12], [13]. It also supports standardized data processing, centralized storage, and scalable services, which may enhance consistency and operational continuity [12]. In HR information systems and e-recruitment, web-based applications have been shown to facilitate recruitment administration, candidate tracking, and evaluation workflows [10], [11]. Therefore, a cloud-based recruitment approach can be positioned as a practical mechanism to improve efficiency, effectiveness, and flexibility within recruitment operations.

3) The role of OCEAN characteristics in determining recruitment success

The informant described how each OCEAN dimension may relate to job success:

- Openness: creativity, innovation, adaptability;
- Conscientiousness: discipline, responsibility, results orientation;
- Extraversion: energy and social interaction;
- Agreeableness: cooperation, empathy, teamwork;
- Neuroticism: emotional instability and stress vulnerability as a potential barrier (S. S. Basuki, personal communication, Aug. 2023).

Discussion. This interpretation aligns with the conceptual definitions of Big Five traits in personality theory and research [7], [8]. In practice, recruiters may use these trait signals to anticipate workplace behaviors relevant to different role demands. For example, high Extraversion may support customer-facing service roles requiring frequent interaction; high Agreeableness may support team-based environments; and low Neuroticism may be advantageous in high-pressure settings where stress regulation is important. These applications should still be framed as **probabilistic indicators**, not deterministic judgments, and should be integrated with other selection evidence.

Designing A Cloud-Based Employee Recruitment Development for PT Sri Rejeki Isman Tbk using the Big Five Personality Model (OCEAN)

B. Perceptions of Integrating OCEAN and Cloud Computing

1) Integrating OCEAN characteristics into a cloud-based recruitment application

The informant indicated that embedding OCEAN assessment into a cloud platform can (i) improve selection accuracy, (ii) reduce time and costs for assessment and evaluation, and (iii) improve transparency and objectivity (S. S. Basuki, personal communication, Aug. 2023).

Discussion. Integration can be implemented through: (a) cloud-based CV screening tools with configurable filters, (b) online interview systems enhanced with structured prompts aligned to trait indicators, and (c) candidate evaluation dashboards computing trait scores and comparisons. E-recruitment systems have been developed to support recruitment management and candidate evaluation processes [10], [11]. When combined with cloud infrastructure, these systems can provide centralized access, easier maintenance, and broader reach [12], [13]. Conceptually, this supports recruitment as a data-informed process rather than purely subjective decision-making.

2) Benefits of cloud technology for collecting, storing, and analyzing OCEAN data

The informant highlighted three major benefits of cloud technology:

- Efficiency: automating screening and reducing administrative workload;
- Effectiveness: enabling more objective, standardized analysis;
- Security: supporting controlled access and protection for sensitive personality data (S. S. Basuki, personal communication, Aug. 2023).

Discussion. Cloud environments can centralize storage and facilitate controlled access to sensitive datasets, which is important for personality assessment data [12], [13]. Nonetheless, security claims must be supported by implementation measures (e.g., access control, encryption, governance policies). Practically, the use of cloud services can support consistent evaluation and reduce fragmented data handling in recruitment workflows, consistent with HR information system development practices reported in e-recruitment literature [10], [11].

C. Challenges in Developing OCEAN- and Cloud-Based Recruitment

1) Key challenges in developing OCEAN-based recruitment within a cloud application

The informant identified major challenges: (i) personality data availability, (ii) measurement accuracy, (iii) organizational understanding of personality factors, (iv) candidate consent and privacy, and (v) internal policies restricting the use of personality data in recruitment (S. S. Basuki, personal communication, Aug. 2023).

Discussion. These challenges are consistent with applied assessment and qualitative recruitment considerations. Measurement requires valid and reliable instruments [8], and organizations need sufficient literacy to interpret results responsibly. Candidate consent is critical because personality data is sensitive and ethically regulated in many organizational contexts. Further, organizational policy constraints may limit adoption even when the approach is technically feasible.

Potential mitigation strategies include collaboration with qualified experts for instrument selection and validation, internal training for recruitment staff, transparent consent procedures, and governance frameworks that regulate data handling and decision use. These efforts align with responsible research and applied organizational practices [18].

2) Company efforts to reduce or address those challenges

The informant described general recruitment challenges (quality candidates, cost, time) and suggested organizational responses such as improving employer attractiveness, using appropriate recruitment technology, and applying rigorous selection methods (S. S. Basuki, personal communication, Aug. 2023).

Discussion. In practical terms, companies can expand outreach using online recruitment platforms, apply structured assessment tools to reduce bias, and design onboarding and development programs to support new hires. Web-based recruitment systems can help broaden candidate access and streamline filtering processes [10], [11], while cloud services can support faster deployment and scalability [12], [13].

D. Future Prospects

The informant's vision emphasized that cloud computing may make recruitment: (i) more automated, (ii) more personalized through deeper data-driven understanding, and (iii) more inclusive by reaching broader candidate pools (S. S. Basuki, personal communication, Aug. 2023).

Discussion. Automation can reduce repetitive tasks such as initial screening and scheduling. Personalization may be achieved through integrated assessment data and structured evaluation dashboards. Inclusivity may be improved by enabling access for candidates in remote locations or with limited physical access to recruitment centers. Together, these changes position recruitment not merely as an administrative process but as a strategic, technology-enabled function.

V. CONCLUSIONS

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This study describes a recruitment development design for PT Sri Rejeki Isman Tbk that integrates the Big Five Personality Model (OCEAN) into a cloud-based recruitment platform. Based on the findings and discussion, three major conclusions emerge:

1. **Efficiency:** Cloud computing reduces infrastructure and administrative burdens and can streamline recruitment workflows through centralized, accessible systems [12], [13].
2. **Effectiveness and objectivity:** OCEAN provides structured personality information that can complement qualifications and experience, supporting more consistent and transparent selection decisions when valid and reliable instruments are used [8], [9].
3. **Flexibility:** Cloud-based recruitment supports access from different locations and times, enabling more adaptive recruitment execution.

Despite its promise, implementation must address challenges related to data availability, instrument validity and reliability, ethical consent and privacy, and internal governance policies. Overall, integrating OCEAN assessment with cloud computing can serve as a practical one-platform strategy for improving recruitment quality and reducing mis-hiring risk.

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Designing A Cloud-Based Employee Recruitment Development for PT Sri Rejeki Isman Tbk using the Big Five Personality Model (OCEAN)

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