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Improving Employee Lifecycle Management through Dashboard-Driven Onboarding and Exit Tracking: A Case Study of a Manufacturing Company

Navya Bhatia, Pratiksha Gupta

MBA Student (HR), School of Business, Indira University, Tathawade, Pune – 411033, India

ABSTRACT

Employee lifecycle management depends on the smooth handling of its entry and exit stages, yet in many manufacturing organisations onboarding and exit formalities are still tracked manually in spreadsheets, which hides delays until they become problems. This paper reports a two-month on-the-job training study carried out in the HR Operations function of a large manufacturing company in India (“The Company”). Two Excel-based dashboards were designed and built: an Employee Exit Process Dashboard covering seven clearance sub-processes and an Onboarding Process Tracker covering four onboarding milestones. Both use formula-driven deadlines, risk flags, key performance indicators (KPIs), pivot tables and a lookup-based self-check panel. The dashboards were populated with structurally realistic simulated data (99 exit records and 100 new-hire records) because live employee records were confidential. Analysis of the simulated data shows how the tools surface process gaps. The average exit clearance completion rate was 67.24%, and 77 of 99 exit cases were flagged “Action Needed”. The full-and-final settlement step was the clearest bottleneck (60 of 99 completed, 27 pending). Only 10 of 100 new hires had completed all four onboarding milestones, the welcome-mail step was the weakest milestone, and 12 personnel files were created while three or more onboarding items were still open. Three recommendations follow. The study illustrates how low-cost, dashboard-based tracking can turn documented HR processes into measurable and manageable ones. Because the data are simulated, the figures show what the tools can reveal and are not performance claims about any real organisation.

Keywords: Employee lifecycle management, HR analytics, onboarding, exit management, HR dashboard, process improvement, manufacturing

1. Introduction

Employee lifecycle management is the structured way in which an organisation manages an employee’s whole journey, from recruitment and onboarding through engagement and development to exit and offboarding. Two stages carry particular operational weight. Onboarding integrates a new hire through documentation, statutory compliance, induction, systems access and cross-departmental coordination, which must all happen within a tight window if the employee is to become productive quickly. Exit management covers the formalities that follow a resignation or separation, including clearances from IT, finance and administration, knowledge transfer, the exit interview and final settlement.

In large manufacturing plants these stages involve many small steps owned by different departments. When they are tracked through manually maintained spreadsheets, HR can only react to delays after they occur. HR dashboards address this by adding a reporting layer on top of raw HR data. The layer converts scattered entries into KPI cards, status trackers and visual flags that show pending items without a record-by-record review (Few, 2006; Marler & Boudreau, 2017).

The setting is India’s heavy machinery and automotive manufacturing sector, a large and fast-growing industrial segment in which the auto component industry alone reported a turnover of ₹7.60 lakh crore in FY2025-26 (ACMA, 2025) and capital goods account for 27 percent of industrial factories (IBEF, n.d.). Workforce processes in such plants must scale reliably as the sector grows.

This paper reports a practical study undertaken as an on-the-job training project in the HR Operations function of a manufacturing plant belonging to a large engine and power-systems company in India, referred to throughout as “The Company”. The author built two dashboards from scratch, one for new-hire onboarding and one for employee exits, and then used the resulting data to identify where each process slows down.

The contributions of the study are fourfold. First, it provides a worked design for an Employee ID-based self-check panel that returns an individual’s onboarding status instantly. Second, it provides formula-driven deadline columns that automatically classify each clearance or onboarding step as on track or overdue. Third, it provides a two-layer risk-flagging scheme (an overall flag plus a column naming the specific delaying sub-process) that did not previously exist in the process. Fourth, it provides data-backed process findings that translate into specific recommendations. The paper is organised as follows: Section 2 gives the theoretical and sector background, Section 3 the objectives, Section 4 the methodology, Section 5 the results, Section 6 a discussion, Section 7 the challenges and learnings, Section 8 recommendations, Section 9 limitations and Section 10 the conclusion.

2. Theoretical Background

The project rests on Employee Lifecycle Management and on HR analytics, so the practical work sits between classical HR theory and data-driven HR decision-making. Five strands of theory informed the design of the tools.

Organisational socialisation. Van Maanen and Schein (1979) describe how newcomers learn an organisation's values, expected behaviours and unwritten rules before they become fully functioning members. This supports treating onboarding as a multi-stage journey and not as a single welcome-day event, since a delay at any one stage affects how well a new hire settles in.

The Four C's of onboarding. Bauer (2010) proposes that effective onboarding operates on four levels: Compliance, Clarification, Culture and Connection. This framework guided the decision to track welcome communication, joining formalities and enrolment steps as distinct milestones and not as one combined status (see also Bauer & Erdogan, 2011).

Psychological contract. Rousseau (1989) shows that employees hold unwritten mutual expectations with their employer. How an employee is treated at exit shapes their lasting impression of the organisation, which is why exit management deserves the same structure as onboarding.

The employee life-cycle model. The model frames the employee journey as a series of stages (attraction, recruitment, onboarding, development, retention and exit), each needing different HR interventions. This study deliberately concentrates on the first and last operational stages, onboarding and exit.

HR scorecard and HR analytics. Becker, Huselid and Ulrich (2001) encourage HR functions to track measurable indicators such as completion rate, pending cases and processing time so that HR processes become accountable and data-driven. The KPI cards, pivot tables and risk-flag columns built in this study are a small-scale application of that thinking.

Organisational context. The Company follows a matrix structure, with a functional reporting line and a plant-level line, and organises HR around the employee lifecycle. Onboarding is run as a checklist of trackable steps, and exit as a clearance-based process in which each function signs off before a case is closed. Because both processes are already broken into discrete steps, they lend themselves to dashboard-based tracking.

Sector context. The Company operates in India's engine, power-systems and heavy-equipment segment. A structured reading of the sector with Porter's five forces shows that the threat of new entrants is low to moderate because of heavy capital requirements and tightening emission norms, supplier power is moderate, buyer power is moderate to high because large buyers negotiate on price and delivery, substitutes such as solar-plus-storage are growing but remain limited in heavy-duty use, and rivalry is high among a handful of organised players (Mordor Intelligence, 2025). A PESTEL reading adds supportive government manufacturing policy and infrastructure spending, steady demand drivers, rising technology and emission-compliance requirements, and, for HR in particular, the four consolidated labour codes that became effective on 21 November 2025. These codes introduce mandatory appointment letters, extended social-security coverage and a revised wage definition, so documentation accuracy in onboarding and exit now carries more compliance weight than before.

3. Objectives of the Study

1. To study how the onboarding and exit stages of the employee lifecycle work at The Company's plant.
2. To build HR dashboards that track both processes.
3. To derive insights from the dashboard data that can guide process improvement.

The objectives build on each other: understanding the processes, building a tool to manage them, and then using the tool to generate insight.

4. Research Methodology

4.1 Research setting and design

The study is an applied, single-site case study conducted during a two-month on-the-job training period within HR Operations at one manufacturing plant of The Company. The work proceeded in four phases: (i) induction and orientation to the HR function; (ii) study of the exit workflow, followed by design and build of the exit dashboard; (iii) study of the onboarding workflow, including discussions with HR team members to compare documented steps with day-to-day practice, followed by design and build of the onboarding tracker; and (iv) consolidation of both dashboards into a final presentation. Each dashboard was reviewed with the reporting manager across several feedback rounds before being finalised.

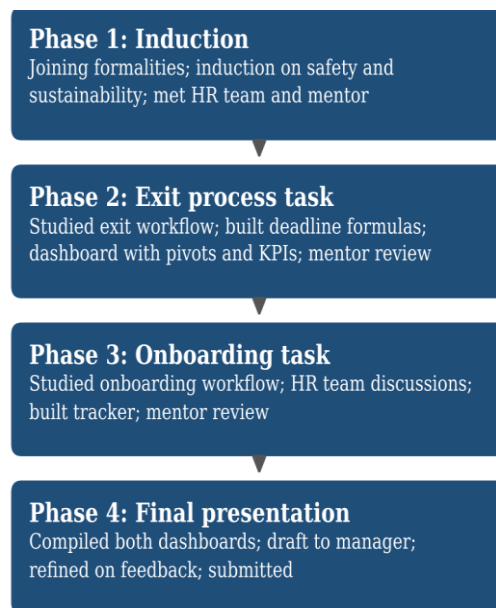


Fig. 1. Project process flow: induction, exit-process task, onboarding task and final presentation.

The final presentation went through a structured feedback loop. The manager's review of the first draft showed that it described what the dashboards did without explaining what would happen if they were not used, so a "Risks if Not Implemented" section was added covering missed exit-clearance deadlines and onboarding steps that slip through unnoticed. The scope also included an initial exploration of workflow-automation tools for reminders as a possible later enhancement.

4.2 Data

Access to actual employee records was restricted for confidentiality. Both dashboards were therefore built and tested on datasets that follow the structure of the organisation's live HR systems but were populated with simulated (dummy) data. The exit dataset holds 99 employee records across 22 fields, and the onboarding dataset holds 100 new-hire records across 14 fields. The sizes were chosen to be large enough to make pivot tables and trend charts meaningful while remaining manageable for formula testing within the available time. All quantitative results in Section 5 derive from these simulated datasets.

4.3 Dashboard design

Two separate Excel workbooks were built, because exit and onboarding differ in milestones, timelines and risk indicators. The tools use Excel formulas, pivot tables and pivot charts, conditional formatting, named ranges and INDEX/MATCH lookups. Table 1 summarises the design of each tool.

Table 1. Design summary of the two dashboards

Element	Exit Process Dashboard	Onboarding Process Tracker
Records / fields	99 records / 22 fields	100 records / 14 fields
Tracked steps	Seven clearance sub-processes: F&F initiation, separation ticket, resignation acceptance letter, formalities discussion, exit discussion, F&F tasks cleared, experience letter	Four milestones: welcome mail sent, joining formalities, medical enrolment, bank details
Deadlines	A deadline and a status column per step, set relative to resignation and exit dates	Formula-driven from start date: welcome mail 10 days before; joining formalities +5 days; medical enrolment +20 days; bank details +7 days

Element	Exit Process Dashboard	Onboarding Process Tracker
Risk flagging	Overall Risk Flag (e.g., “Action Needed”) plus Process Risk column naming the delaying step	Open Items count (0–4); “Needing Attention” flag when two or more are open; flag where file was created with major gaps
Lookup	None (aggregate view)	Self-check panel using a named range and INDEX/MATCH
KPI layer	Total exits; fully completed; pending; completion rate; average notice period; steps tracked	Total tracked; fully onboarded; needing attention; files created despite major gaps

4.4 Analysis approach

Analysis was descriptive. Completion counts, pending counts, flag distributions and monthly volumes were obtained from pivot tables and cross-tabulations. A step that is both the weakest in completion and the largest in pending backlog was treated as the process bottleneck. The overall exit completion rate was computed as completed step-instances divided by total step-instances (99 employees $\times$ 7 steps = 693).

5. Results and Analysis

5.1 Exit process

Table 2. Exit dashboard summary (simulated data)

Metric	Value
Total exits	99
Fully completed (all 7 processes)	6
Pending exits	93
Overall completion rate	67.24%
Average notice period	43.06 days
Exit processes tracked end-to-end	7
Overall Risk Flag: Action Needed / In Progress / All Done	77 / 16 / 6

Of the 99 exit cases, only 6 were fully complete across all seven steps and 93 had at least one clearance pending. A total of 466 of 693 step-instances were complete, giving the 67.24% completion rate. The risk flag shows that 77 cases (about three in four) were marked “Action Needed”, 16 were in progress and 6 were done. Exit clearance therefore does not resolve itself with time; it needs active monitoring with someone pushing pending cases forward.

Table 3. Completion and backlog by exit sub-process

Sub-process	Completed	Pending
Separation ticket raised	72	12
Exit discussion held	72	17
Acceptance letter shared	69	21
F&F initiation completed	68	19
Experience letter shared	64	17
Formalities discussion held	61	14
F&F tasks cleared	60	27

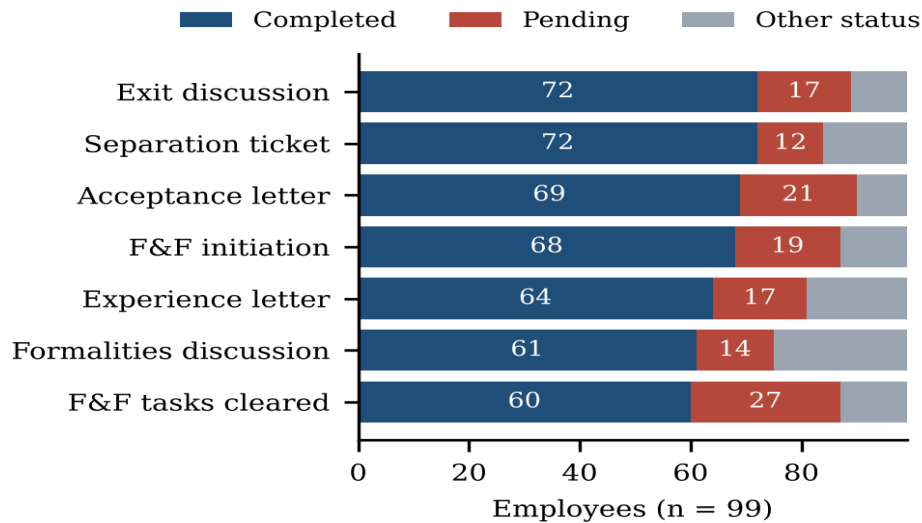


Fig. 2. Status of the seven exit sub-processes (n = 99). “Other status” covers records neither completed nor pending.

Separation ticket raised and exit discussion held were the strongest steps (72 each), while experience letter (64), formalities discussion (61) and F&F tasks cleared (60) were weakest. F&F tasks cleared also carried the largest pending backlog of any single step (27 employees). Because the same step is both the weakest in completion and the largest in backlog, it is the real bottleneck and not simply one low figure among several. Since this step involves closing out settlement items and depends on finance and multiple internal approvals, the finding suggests that the settlement stage is where exit cases are most likely to stall.

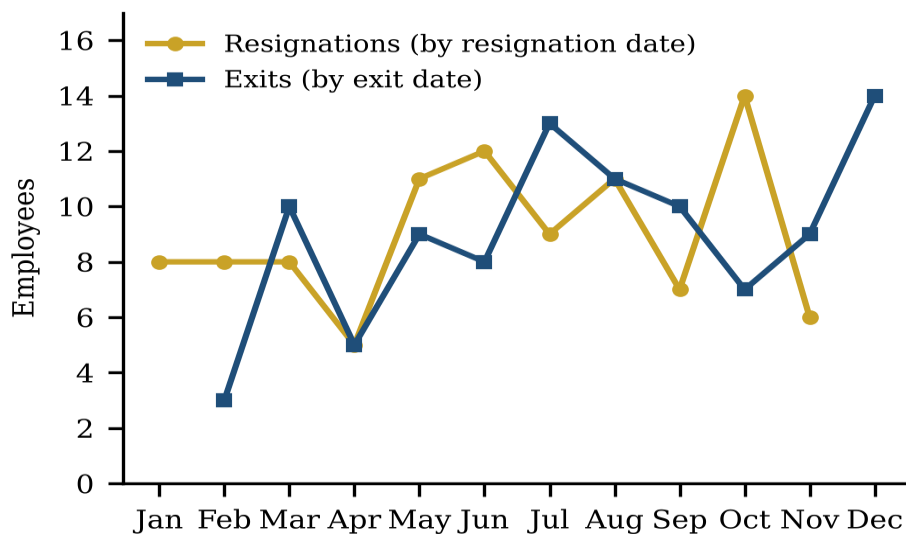


Fig. 3. Monthly resignation and exit volumes.

Monthly resignation and exit volumes (Fig. 3) show the time between initiation and last working day. Where the two series sit close together exits are being processed promptly, and where the gap widens resignations are accumulating faster than they are closed. Both series total 99 cases. The pattern across the year also helps to test whether delays are seasonal or workload-related and not constant.

5.2 Onboarding process

Table 4. Onboarding tracker summary (simulated data)

Metric	Value
Total new hires tracked	100
Fully onboarded (all 4 milestones)	10

Metric	Value
Needing attention (2 or more open)	61
Files created despite major gaps (3+ open)	12

Only 10 of 100 new hires had completed all four milestones. A further 61 were flagged as needing attention because two or more milestones were open. Twelve employees had their personnel file created while three or more items were still open. The file-creation step, normally an administrative record-keeping action, therefore does not depend on onboarding being substantively complete: the work of onboarding and the paperwork that records it run on separate, disconnected timelines. At present, a completed personnel file is not dependable evidence that onboarding has finished.

Table 5. Status of the four onboarding milestones (n = 100)

Milestone	Completed	In progress	Pending
Bank details	65	20	15
Joining formalities	59	23	18
Medical enrolment	58	23	19
Welcome mail sent	49	24	27

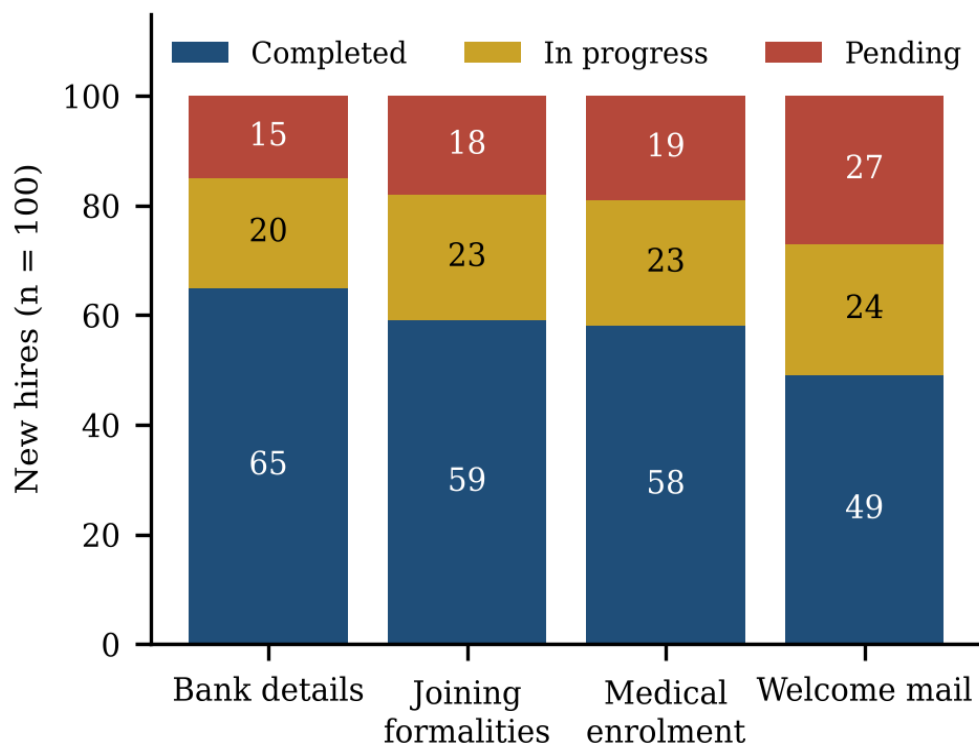


Fig. 4. Status of the four onboarding milestones (n = 100).

Completion varies across milestones (Table 5, Fig. 4). Bank details performed best (65 completed, 15 pending), with joining formalities (59) and medical enrolment (58) in the middle. Welcome mail sent was the weakest, with only 49 completed and 27 pending, the highest pending count of any milestone. This is counterintuitive because it is the earliest and simplest step. It suggests that the welcome communication may not receive the consistent follow-through of more procedural steps such as bank details, which probably have clearer ownership and a harder deadline tied to payroll.

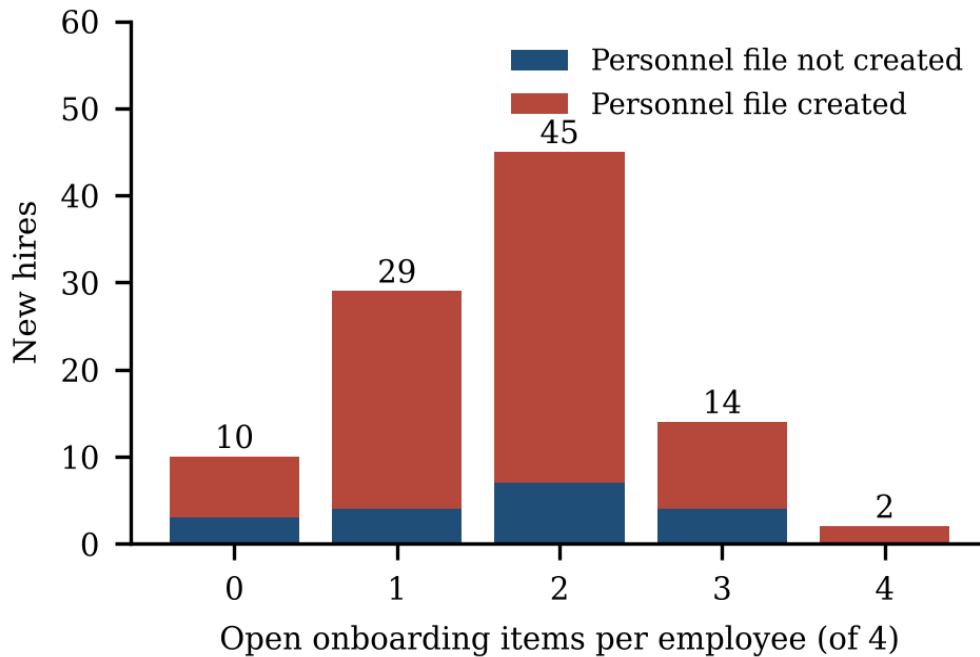


Fig. 5. Distribution of open onboarding items and personnel-file creation status.

Fig. 5 shows how incompleteness is distributed. The number of employees with 0, 1, 2, 3 and 4 open items was 10, 29, 45, 14 and 2 respectively, so the typical new hire was missing one or two milestones and not almost done or far behind. The chart also makes the file-creation gap concrete: personnel files were created for 38 of the 45 employees with two open items, and for 12 employees with three or four open items. The separate Check for Allowance field is independent of the four-milestone calculation, so it can move out of step with them. Its “No” count (61) coincides numerically with the “Needing Attention” count but the two groups of employees overlap only partially.

6. Discussion

The findings relate to the three objectives as follows. For Objective 1, the KPI summaries (Tables 2 and 4) show that both stages were examined step by step: only 67.24% of exit clearance steps were complete on average, and only 10% of new hires were fully onboarded. For Objective 2, two working tools were built that include KPI layers, formula-driven deadline tracking, pivot tables, charts and a self-check panel. For Objective 3, the data identified three specific, evidence-backed areas for improvement: the F&F tasks cleared step, the welcome-mail step and the file-creation rule.

Three broader observations emerge. First, there is a gap between documented and lived process. The seven documented clearance steps are written checkpoints, but the pace at which cases move through them depends on cross-departmental coordination that the documentation does not capture. The F&F step is the one dependent on the most teams and is also the one most likely to slip. Second, assumptions about where a process breaks can be wrong. It was initially assumed that paperwork-heavy steps such as bank details would be the slowest, but the data showed the opposite. Third, administrative completion is not the same as actual completion. A record marked “done” in one system does not guarantee that the underlying work is finished, and the value of a completion record depends on the logic that links it to the real work.

7. Challenges and Learnings

Building logic without a reference answer. Because live records could not be used, every deadline formula was tested against a dataset created for the project. With no known correct output, each formula had to be reasoned from first principles and checked by hand on sample rows, since one wrong cell reference can silently misstate deadlines across dozens of records.

Reconciling documentation with practice. Written procedures describe a clean, linear sequence, whereas conversations with HR staff showed more overlap, informal follow-up and case-by-case judgement. The dashboards were built around the documented steps to keep tracking consistent across employees, which means some informal aspects of the real process are not captured.

Working with simulated data. Patterns in the data could reflect a real process characteristic or merely the way the dataset was constructed, so results had to be interpreted with care. This constraint stayed present throughout the project and also built the habit of asking whether a dataset truly supports a conclusion.

Communicating value. Technical work persuades a non-technical audience more through the consequences of ignoring it than through a list of features. Leading with risk, as the revised presentation did, proved the more convincing framing and is the main communication lesson of the project.

8. Recommendations

1. **Give the F&F tasks cleared step a dedicated owner and make it the first target for redesign.** The step was both the weakest in completion (60 of 99) and the largest in backlog (27). The dependency behind its delays, most likely finance sign-off or multi-party approval, should be pinpointed, and one named person should be accountable for chasing it instead of managing it as one of seven equal items.
2. **Strengthen ownership and follow-through on the welcome-mail step.** With 49 of 100 completed and 27 pending, the weakness points to an accountability gap and not to complexity. A single clear owner should send the communication, and a reminder should trigger ahead of the deadline already built into the dashboard, instead of flagging the step only after it is overdue.
3. **Link personnel-file creation to onboarding progress.** Twelve files were created with three or more milestones open. A simple check, manual or built into the dashboard, should flag or block file creation until open items fall below a threshold (for example, no more than one milestone outstanding).

Expected outcomes. Addressing the F&F step targets the largest single source of pending exits and should produce the clearest rise in the overall completion rate. Fixing the welcome-mail step should improve the first impression new hires receive and the momentum of later steps. Linking file creation to onboarding completion makes the personnel file a trustworthy record of actual onboarding status.

9. Limitations

- **Simulated data.** Because live employee records were confidential, all figures come from structurally realistic simulated data. They illustrate what the dashboards can surface and should not be read as a verified account of onboarding and exit performance in reality, since simulated data cannot reproduce the exceptions and irregularities of real records.
- **Single-site scope.** The study covers one plant. HR practices, staffing and informal coordination may differ at other sites, so the bottlenecks identified should not be generalised without separate verification.
- **Single time window and snapshot.** The work was completed within one two-month window and analyses a point-in-time snapshot. Distinguishing persistent process weaknesses from temporary fluctuations requires tracking the same metrics across multiple periods.
- **Narrow lifecycle scope.** Only onboarding and exit were studied. Recruitment, performance management and learning and development interact with these stages but were outside the scope.

10. Conclusion and Future Scope

This study designed and applied two Excel-based dashboards for onboarding and exit tracking in a manufacturing HR function. Even on simulated data, the tools showed how structured tracking converts broad, documented HR processes into specific, measurable and more manageable ones, and how it can reveal process gaps that would stay invisible under manual spreadsheet tracking: a settlement-stage bottleneck in exits, an under-performing first onboarding step, and a disconnect between administrative records and actual onboarding progress.

Future work should (i) test the recommendations on live HR data and measure whether assigning ownership improves completion rates over successive reporting periods; (ii) extend the same approach of breaking a broad process into deadline-driven checkpoints to other lifecycle stages; (iii) validate whether the identified bottlenecks are consistent across other plant locations; and (iv) explore automated reminders, for example through workflow-automation tools, as a way of acting on dashboard flags before deadlines are missed.

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