

metree-ai

Learning & Development Playbook

Predict Learning Impact & Prescribe Personalized Paths



Purpose

Move beyond completion rates to measurable impact: predict how learning affects performance, ramp time, retention, and mobility — then prescribe persona-based learning paths and manager practices that maximize outcomes.

Example outcomes & KPIs

- Ramp-time ↓ 10–25% in target roles
- Performance uplift ↑ 5–10% for defined personas
- 12-month retention ↑ 5-12% among learners vs. matched controls
- Internal mobility rate ↑; skills proficiency ↑ (assessments/badges)
- Manager enablement: % with coaching actions post-learning;
 Learner NPS ↑







Prerequisites & Data



Prerequisites

- LMS with events, course and user data; basic skills taxonomy and course-to-skill mapping
- Defined business outcomes (ramp, performance, retention, mobility) and target personas
- Access to HRIS, performance/OKR data, retention/mobility events, engagement items
- Consent/privacy review
- Manager involvement plan

Data you need

- LMS: enrollments, completions, scores, time-to-complete, modality, session dates, instructor/coach, course→skill tags
- HRIS: role, level, location, manager, tenure
- Performance/OKR: quarterly ratings, KPI/OKR attainment; manager feedback
- Retention/Mobility: exits (voluntary), transfers/promotion dates and targets
- **Skills/Assessment**: pre/post skill measures, badges, certifications; 360 data
- Engagement: learner NPS, manager coaching actions







Executive Sponsor

- Sets the vision, success criteria, and guardrails
- Secures resources, removes blockers
- Approves scope and scale-up decisions



L&D Director

- Owns learning strategy and portfolio
- Prioritizes personas/use cases
- Translates analytics into programs, cadence, and communications



LMS/HRIS Data Steward

- Maintains data standards (course IDs, skills tags, timestamps, user mapping)
- Monitors data quality and lineage
- Trains admins/owners on fields and processes



- Drive adoption with leaders and managers
- Codify role-specific actions
- Collect qualitative feedback
- Monitor equity of access/outcomes

People Analytics Lead

- Designs the measurement framework (PSM/DiD)
- Builds predictive models for ramp/performance/retention
- Ensures interpretability and fairness monitoring

Data Privacy & Ethics Officer

- Ensures lawful basis/consent, DPIAs, minimization/retention, and audit trails
- Approves fairness/impact tests
- Communicates guardrails and interfaces with Legal/Works Councils as needed







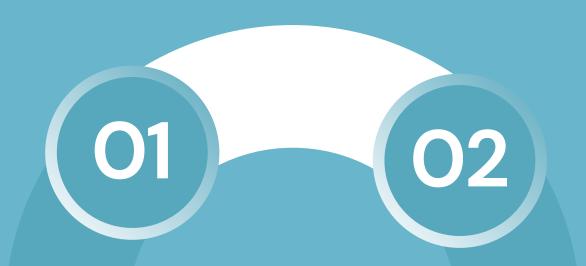




Define outcomes & personas

Specify outcomes per persona

Ramp-time (days to proficiency), next-cycle rating uplift, 12-month retention, internal mobility likelihood

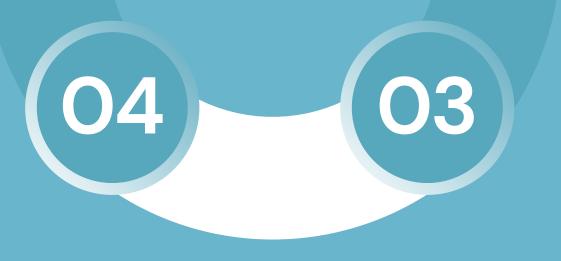


Build personas

By role/level × tenure × skill gaps
Confirm business priority segments (e.g., Team
Leads, Customer Support L1)

Document success thresholds

For measuring the impact



Document manager behaviors

For testing (e.g. shadowing, practice tasks, 1:1 cadence)

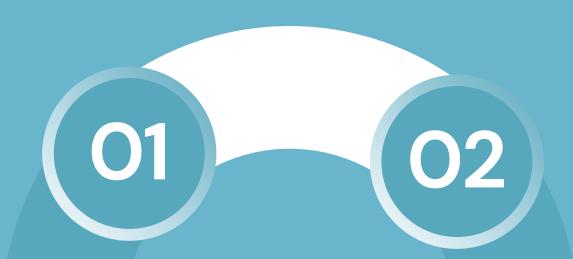




Measure impact credibly

Propensity score matching

Method 1 to estimate the learning effect vs. comparable non-learners

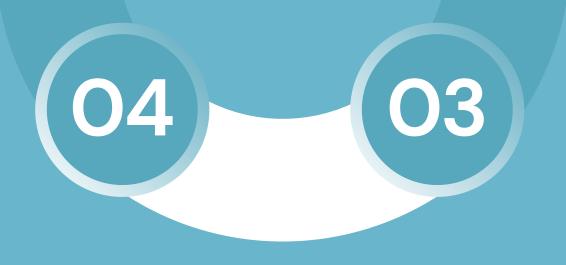


Difference-in-differences

Method 2 to estimate the learning effect vs. comparable non-learners

Publish effect sizes

With confidence intervals and subgroup fairness checks



Validate with small A/B test

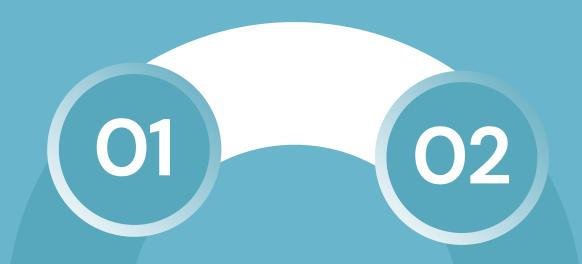
Do this where it's feasible (e.g., staggered enrollment)



Design prescriptive learning paths & nudges

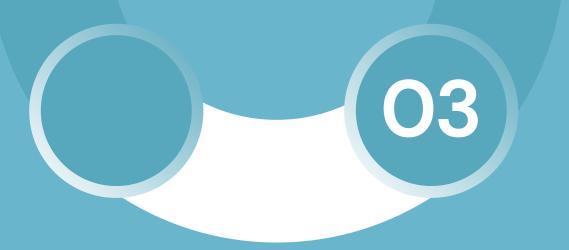
Assemble modules per persona

For each persona 3–5 modules with the best impact/effort ratio; link to specific on-the-job practice and manager coaching prompts



Add next-best-action rules

E.g., if skill gap X persists, assign micro-module + coaching task
Schedule nudges in the flow of work
(calendar/chat)



Prepare enablement packs

Manager scripts, checklists, and "evidence of practice" templates

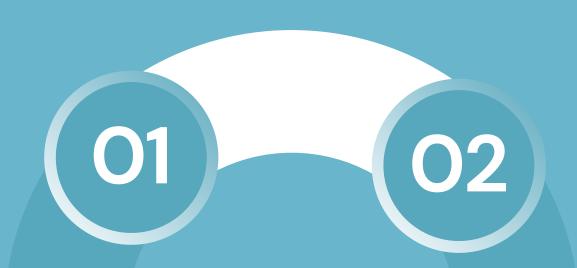




Deliver & embed in the flow of work

Surface recommendations

Feature them on the LMS home and team dashboards



Automate enrollments

Automate where appropriate

Track manager behaviors

E.g. coaching, shadowing, feedback notes Ensure equitable access across shifts/regions



Integrate with 1:1 agendas

Issue notes to managers

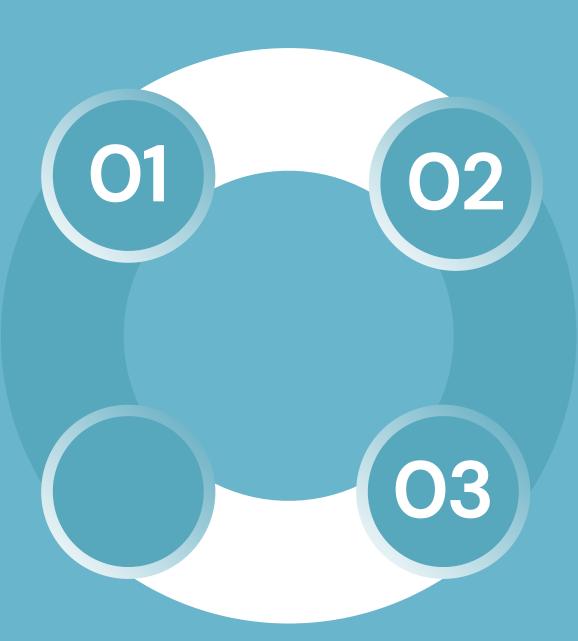




Evaluate, iterate, and scale

Monitor lift vs. matched controls

Plus rating uplift, retention, mobility



Collect qualitative feedback

What helped, where friction remains

Continuous updates

Retire low-signal modules
Boost high-ROI content
Rfine personas/paths
Publish quarterly executive summaries
Expand to new roles



Evaluation and ROI



Benefits

- Faster time-to-proficiency
- Performance improvement
- Reduced external hiring via internal mobility
- Lower regrettable attrition
- Higher learner/manager NPS



Sample ROI

[(Benefit – Cost) / Cost] × 100 Quantify vacancy cost avoided, performance uplift value, and saved recruiting spend from mobility



Quarterly report

Quarterly trend dashboards and executive brief; include fairness access/outcomes and manageraction adherence



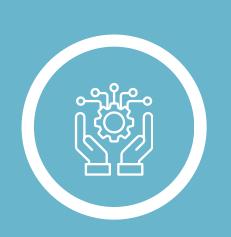




Causality & bias

Selection effects can overstate impact. Use PSM/DiD, control for tenure/role/seasonality, and publish effect sizes with limitations.





Adoption & manager enablement

Low participation kills impact.
Embed in flow of work, nudge managers, and track coaching actions—not just completions.

Privacy & ethics

Learning/behavior data can be sensitive.
Obtain consent, minimize/aggregate where
possible, and maintain audit trails.





Metric gaming & vanity KPIs

Chasing completions/time-on-course can miss real outcomes.

Pair activity metrics with business outcomes (ramp, performance, retention).



Quick-start checklist

(01)

Prepare

Clean LMS events + course→skill tags + HRIS join keys
Define outcomes & personas; agree manager behaviors to test
Set up PSM/DiD measurement; baseline metrics & fairness checks

- Build predictive models; create impact/lift dashboard
- Prescribe paths & coaching prompts; enable nudges in flow of work
- Pilot with matched controls
 Weekly monitoring & mid-course corrections
- Quarterly impact & ROI report





Contact Us

Are you struggling with bringing the most value out of your People Data?

Does Predictive Analytics seem like a distant dream?

We are here to help. Send us a message for more information!



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