

Monitoring Plan

MATRIKS SUMBER DATA DAN PIC

Coding Camp powered by DBS Foundation | Road to Future Workforce

1. Tujuan

Matriks ini digunakan untuk memastikan setiap KPI memiliki:

- sumber data yang jelas;
- pemilik data (*data owner*);
- PIC pengumpulan;
- PIC validasi;
- frekuensi pengukuran;
- waktu pelaporan;
- dan mekanisme penyimpanan data.

Prinsipnya:

Every KPI → One Definition → One Data Source → One Data Owner → One PIC → One Reporting Cycle

2. Struktur Peran Pengelolaan Data

Dalam pengelolaan KPI, peran dibedakan menjadi:

Data Owner

Pihak yang bertanggung jawab atas kebenaran dan ketersediaan data.

Data Collector

Pihak yang mengumpulkan atau mengekstrak data.

Data Validator

Pihak yang melakukan pengecekan kualitas dan konsistensi data.

Data Analyst

Pihak yang mengolah data menjadi KPI dan insight.

Program Manager

Pihak yang menggunakan hasil KPI untuk pengambilan keputusan dan intervensi program.

3. Struktur PIC Program

Untuk keperluan dokumen, PIC dapat menggunakan struktur berikut:

Kode	PIC/Unit	Tanggung Jawab
PM	Program Manager	Koordinasi keseluruhan program
LO	Learning/Academic Lead	Kurikulum dan kualitas pembelajaran
MC	Mentor/Coach	Pendampingan peserta
AO	Assessment Officer	Assessment dan competency measurement
CO	Career Officer	Career preparation dan alumni
DO	Data Officer	Pengumpulan, cleaning, dan database
DA	Data Analyst	Analisis KPI dan dashboard
COm	Communication Officer	Sosialisasi dan komunikasi
QA	Quality Assurance	Validasi kualitas proses dan data
AL	Alumni/Tracer Officer	Tracer study dan impact tracking

Nama unit/PIC aktual dapat diganti sesuai struktur organisasi penyelenggara.

4. Matriks Sumber Data KPI

KPI	Definisi Singkat	Sumber Data	Data Owner	PIC	Frekuensi
Registered Participants	Peserta terdaftar	Registration System	Program	DO	Harian
Verified Participants	Data peserta tervalidasi	Registration Database	Program	DO/QA	Mingguan

KPI	Definisi Singkat	Sumber Data	Data Owner	PIC	Frekuensi
Activation Rate	Peserta yang berhasil mengakses LMS	LMS	Learning	DO	Mingguan
Active Learner Rate	Peserta dengan aktivitas valid	LMS Activity Log	Learning	DO/DA	Mingguan
Module Completion	Modul selesai	LMS	Learning	LO/DO	Mingguan
Assignment Completion	Assignment selesai	LMS	Learning	LO/DO	Mingguan
Assessment Participation	Peserta mengikuti assessment	Assessment System	Assessment	AO	Per assessment
Project Completion	Project memenuhi kriteria	Project Repository/LMS	Learning	LO/MC	Milestone
Portfolio Creation	Peserta memiliki portfolio	Portfolio Database	Learning/Career	CO	Akhir
Certification Rate	Peserta memenuhi syarat sertifikasi	Certification Database	Program	PM/AO	Akhir
Learning Gain	Perubahan pre/post-test	Assessment Database	Assessment	AO/DA	Awal–akhir
Competency Achievement	Peserta mencapai threshold	Assessment System	Assessment	AO	Akhir
Job Readiness	Peserta mencapai readiness threshold	Readiness Assessment	Career	CO/AO	Akhir
Satisfaction	Penilaian peserta	Survey	Program	DO/DA	Tengah/akhir
Tracer Response	Alumni merespons tracer	Tracer Database	Alumni	AL	3/6/12 bulan
Career Engagement	Alumni memiliki aktivitas karier	Tracer Survey	Alumni/Career	AL/CO	3/6/12 bulan

KPI	Definisi Singkat	Sumber Data	Data Owner	PIC	Frekuensi
Continued Learning	Alumni melanjutkan pembelajaran	Tracer Survey	Alumni	AL	6/12 bulan

5. Matriks Sumber Data Berdasarkan Tahapan Program

Fase 1 — PREPARE

Timeline: Minggu 1–2

Aktivitas	Data	Sumber	PIC
Program setup	Program readiness checklist	Project Management	PM
Learning preparation	Curriculum checklist	Learning system	LO
Platform preparation	Platform readiness	LMS	LO/DO
Assessment preparation	Assessment instrument	Assessment system	AO
Dashboard preparation	KPI dictionary	KPI database	DA
Baseline preparation	Baseline questionnaire	Survey system	DO

Evidence

- Checklist.
 - SOP.
 - Curriculum.
 - Assessment instrument.
 - Dashboard.
 - Data dictionary.
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6. Fase 2 — RECRUITMENT

Timeline: Minggu 1–4

KPI	Sumber Data	PIC
Number registered	Registration system	DO
Number verified	Registration database	DO/QA
Registration conversion	Registration analytics	DA
Participant profile	Registration form	DO
Learning path selection	Registration database	LO/DO

Data Utama

Participant ID

Name

Email

Education

Learning Path

Registration Date

Verification Status

Eligibility Status

7. Fase 3 — ONBOARDING

Timeline: Minggu 3–4

KPI	Sumber Data	PIC
Onboarding completion	LMS	DO
Platform activation	LMS login	DO
Baseline	Baseline survey	DO
Pre-test	Assessment system	AO
Learning goal	Participant survey	DO/LO

Output Data

Participant Baseline Dataset

yang menjadi pembanding untuk pengukuran outcome.

8. Fase 4 — LEARNING

Timeline: Minggu 5–16

KPI	Sumber Data	PIC
Active learner	LMS log	DO
Module completion	LMS	LO/DO
Assignment completion	LMS	LO/DO
Learning progress	LMS analytics	DA
Assessment score	Assessment system	AO
Soft-skill completion	LMS	LO
Financial-literacy completion	LMS	LO

Frekuensi

Weekly Monitoring

Week 1



Extract Data



Validate



Calculate KPI



Identify At-Risk



9. Fase 5 — PROJECT

Timeline: Minggu 9–20

KPI	Sumber Data	PIC
Project started	LMS/Project system	LO
Project progress	Project tracker	MC
Project completion	Project repository	LO/QA
Project score	Assessment rubric	AO
Portfolio	Portfolio system	CO

Project Evidence

Setiap project minimal memiliki:

Project ID

Participant ID

Learning Path

Project Title

Milestone

Status

Score

Repository/Demo

Reviewer

Final Status

10. Fase 6 — ASSESSMENT

Timeline: Minggu 5–22

Assessment	Sumber Data	PIC
Pre-test	Assessment System	AO
Formative assessment	LMS	AO
Assignment assessment	LMS	AO/LO
Project assessment	Rubric	AO
Post-test	Assessment System	AO
Final assessment	Assessment System	AO

Data yang dihasilkan

- Pre-test score.
- Post-test score.
- Learning gain.
- Competency score.
- Competency status.

11. Fase 7 — CERTIFICATION

Timeline: Minggu 21–22

Data	Sumber	PIC
Completion status	LMS	DO
Assessment status	Assessment system	AO
Project status	Project system	LO
Certification eligibility	Certification database	PM/AO
Certificate issued	Certification system	PM

Validation

Sebelum sertifikasi:

Participant → Completion → Assessment → Project → Eligibility → Certification

12. Fase 8 — CAREER PREPARATION

Timeline: Minggu 17–24

KPI	Sumber Data	PIC
CV readiness	Career assessment	CO
Portfolio readiness	Portfolio review	CO
Interview readiness	Mock interview	CO
Job readiness	Readiness assessment	CO/AO
Career participation	Career activity log	CO

Career Dataset

Participant ID

Learning Path

Portfolio Status

CV Status

Interview Status

Job Readiness Score

Career Interest

Career Activity

13. Fase 9 — ALUMNI TRACKING

Timeline: T+3, T+6, T+12 bulan

KPI	Sumber Data	PIC
Alumni response	Tracer survey	AL
Employment	Tracer survey	AL
Internship	Tracer survey	AL

KPI	Sumber Data PIC
Freelance/project	Tracer survey AL
Entrepreneurship	Tracer survey AL
Continued learning	Tracer survey AL
Career progression	Tracer survey AL/CO

Tracer Framework

GRADUATION

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3 MONTHS

|



6 MONTHS

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12 MONTHS

14. Matriks PIC berdasarkan KPI

PIC	KPI Utama	Tanggung Jawab
PM	Overall KPI	Program performance
LO	Learning KPI	Learning progress
MC	Engagement	Mentoring & intervention
AO	Competency	Assessment
CO	Job Readiness	Career preparation
DO	Data Quality	Data collection

PIC KPI Utama	Tanggung Jawab
DA KPI	Analytics/dashboard
QA Data Quality	Verification
AL Impact	Tracer study

15. Matriks RACI Data

Aktivitas	PM	LO	MC	AO	CO	DO	DA	QA	AL
Registration	A	C				R	C	C	
Baseline	A	C		C		R	C	C	
Learning Monitoring	A	R	R	C		R	C	C	
Assessment	A	C	C	R		C	C	C	
Project	A	R	R	C	C	C	C	C	
Certification	A	C		R		C	C	C	
Career	A	C	C	C	R	C	C	C	
Tracer Study	A				C	C	C	C	R
KPI Dashboard	A	C		C	C	R	R	C	C
Final Report	A	C	C	C	C	R	R	C	C

R = Responsible

A = Accountable

C = Consulted

16. Data Flow

Sistem data program dapat menggunakan alur:

PARTICIPANT

|



REGISTRATION



LMS



└───▶ LEARNING DATA



└───▶ ASSIGNMENT DATA



└───▶ ASSESSMENT DATA



└───▶ PROJECT DATA



DATA WAREHOUSE



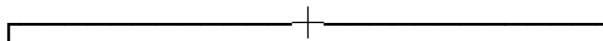
DATA VALIDATION

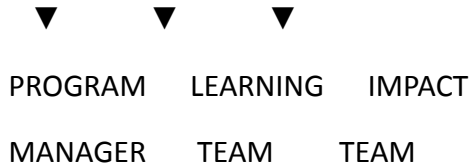


KPI CALCULATION



LOOKER STUDIO





17. Data Quality Framework

Setiap data KPI harus diperiksa berdasarkan lima dimensi:

Dimensi Pertanyaan

Accuracy Apakah data benar?

Completeness Apakah data lengkap?

Consistency Apakah format konsisten?

Timeliness Apakah data tersedia tepat waktu?

Uniqueness Apakah tidak ada duplikasi?

Target Data Quality

Indikator Target

Completeness $\geq 95\%$

Valid records $\geq 95\%$

Duplicate rate $\leq 1\%$

Reporting timeliness $\geq 95\%$

KPI calculation error $< 1\%$

18. Data Governance

Untuk menjaga integritas data, digunakan prinsip:

One Participant — One ID

Setiap peserta memiliki **Participant ID unik**.

Contoh:

CC2024-000001

CC2024-000002

CC2024-000003

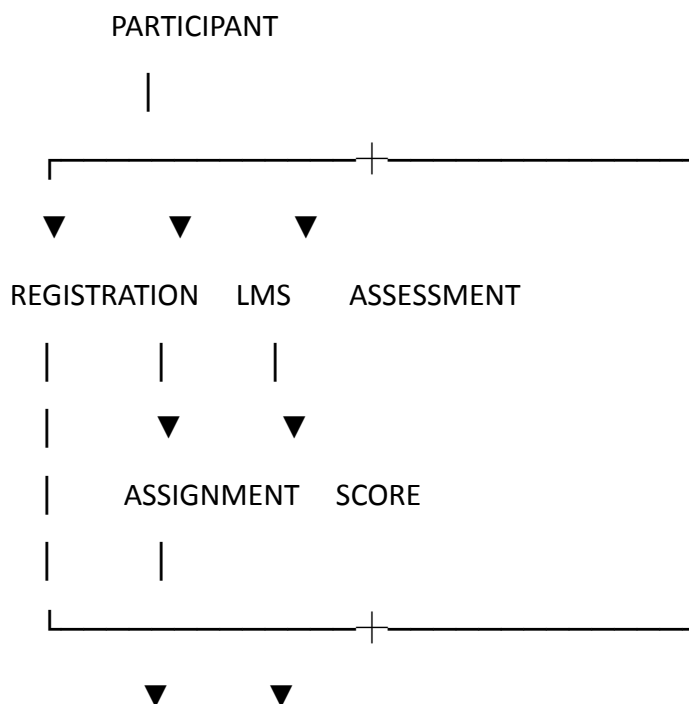
ID tersebut digunakan pada:

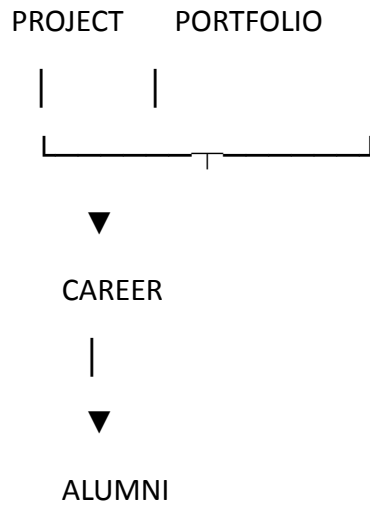
- Registration.
- LMS.
- Assessment.
- Project.
- Certification.
- Career.
- Alumni.

Dengan demikian, data dapat di-*link* tanpa bergantung pada nama peserta.

19. Struktur Master Data

Data program dapat dibangun menggunakan model:





20. Reporting Cycle

Weekly

Fokus:

- Active learner.
- Progress.
- Assignment.
- At-risk participant.

PIC: DO + DA + LO

Monthly

Fokus:

- Completion trend.
- Assessment.
- Project progress.
- Intervention effectiveness.

PIC: PM + DA

End of Program

Fokus:

- Completion.
- Competency.
- Learning gain.
- Certification.
- Portfolio.
- Job readiness.

PIC: PM + AO + CO + DA

Post Program

Fokus:

- Employment.
- Internship.
- Project.
- Entrepreneurship.
- Continued learning.
- Career progression.

PIC: AL + CO + DA

21. KPI Reporting Calendar

KPI	Weekly	Monthly	End Program	T+3	T+6	T+12
Participation	•	•	•			
Active Learner	•	•	•			
Module Completion	•	•	•			
Assignment	•	•	•			
Assessment	•	•	•			
Project		•	•			

KPI	Weekly	Monthly	End Program	T+3	T+6	T+12
Portfolio	•	•				
Certification			•			
Learning Gain			•			
Competency			•			
Job Readiness	•	•				
Satisfaction	•	•				
Career Engagement				•	•	•
Continued Learning					•	•

22. Escalation Mechanism

Jika KPI berada di bawah threshold:

KPI BELOW TARGET



Data Validation



Root Cause Analysis



Identify At-Risk Group



Intervention



Re-measure



Escalate if Needed

Contoh:

Module Completion <80%

- cek peserta inactive
 - identifikasi learning barrier
 - mentor intervention
 - reminder/re-engagement
 - monitoring 1 minggu
 - hitung kembali KPI.
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23. Dashboard Ownership

Dashboard	Pemilik	Pengguna
Executive Dashboard	PM	Management
Participant Dashboard	Learning	Mentor
Learning Dashboard	LO	Learning Team
Assessment Dashboard	AO	Assessment Team
Project Dashboard	LO	Mentor
Career Dashboard	CO	Career Team
Impact Dashboard	AL/DA	Management
Data Quality Dashboard	DO/QA	Program Team

24. Minimum Evidence per KPI

Setiap KPI harus dapat diaudit melalui bukti.

KPI	Evidence Minimum
Participation	LMS activity
Completion	Completion record

KPI	Evidence Minimum
Assignment	Submission record
Assessment	Score record
Project	Project + rubric
Portfolio	Portfolio URL/record
Certification	Certificate record
Learning Gain	Pre/post score
Job Readiness	Readiness assessment
Satisfaction	Survey response
Employment	Tracer response
Career Engagement	Tracer evidence
Continued Learning	Alumni response/evidence

25. Prinsip Akhir Data & PIC

Sistem pengelolaan program harus memastikan:

Tidak ada KPI tanpa definisi.

Tidak ada KPI tanpa sumber data.

Tidak ada sumber data tanpa data owner.

Tidak ada proses tanpa PIC.

Tidak ada target tanpa periode pengukuran.

Tidak ada impact claim tanpa evidence.

Dengan struktur tersebut, Coding Camp dapat dikembangkan dari sekadar **program pelatihan** menjadi **data-driven talent development program**.

PROGRAM



ACTIVITY DATA



LEARNING DATA



KPI



DECISION



INTERVENTION



OUTCOME



IMPACT