Enterprise data quality management capability: capability map overlaid with the Government Data Quality Framework, DAM policy and DQAP guidance

Colour shows the GDQF principle each capability mainly serves. Codes show the guidance it realises (key on the last page). Workflows P1 to P5 are on the following pages.

Government Data Quality Framework principles

- P1 Commit to data quality
- P2 Know your users and their needs
- P3 Assess quality throughout the data lifecycle
- P4 Communicate data quality clearly and effectively
- P5 Anticipate changes affecting data quality

C1 Data governance and ownership

- Accountability and roles
- Policies and standards
- Governance boards and escalation

Guidance: DAM · DOM · GDQF-P1

C2 Critical data asset identification

- Identify and designate by purpose
- Register in the catalogue
- Return to GDS

Guidance: DAM · IDC Workflow: P1

C3 Metadata and discoverability

- Record the 13 properties
- Publish in open standards
- Profile checks

Guidance: MD · DCAT · GDQF-P4

C4 User needs and requirements

- User research
- Critical data items
- Trade-offs

Guidance: GDQF-P2 · DQAP2

C5 Rules and standards

- Rules by dimension
- Targets from the issues framework
- Data contracts

Guidance: DQAP2 · IF · GDQF-D Workflow: P2

C6 Measurement and monitoring

- Baseline
- Scheduled measurement
- Trends and controls

Guidance: DQAP3 · DQAP7 · GDQF-P3 Workflow: P4

C7 Issue management and prioritisation

- Log issues
- Prioritise with the issues framework
- Escalate overdue issues

Guidance: IF · DQAP3 · DQAP4 Workflow: P3

C8 Root cause and remediation

- Root cause analysis
- Options and cost-benefit
- Fix at source

Guidance: DQAP5 · GDQF-P5

C9 Reporting and communication

- Communication plan
- Quality statements
- Caveats and limitations

Guidance: DQAP6 · GDQF-P4 · COP

C10 Assurance and review

- Annual review
- Conformance with requirements
- Independent assurance

Guidance: DAM · IDC · COP · QAAD Workflow: P5

C11 Capability, skills and culture

- Skills and training
- Maturity assessment
- Community of practice

Guidance: GDQF-P1

C12 Change and lifecycle management

- Assess before and after change
- Supplier quality
- Archive with quality information

Guidance: GDQF-P5 · GDQF-LC · DQAP7

GDQF data lifecycle: quality is assessed and managed at every stage (principle 3)

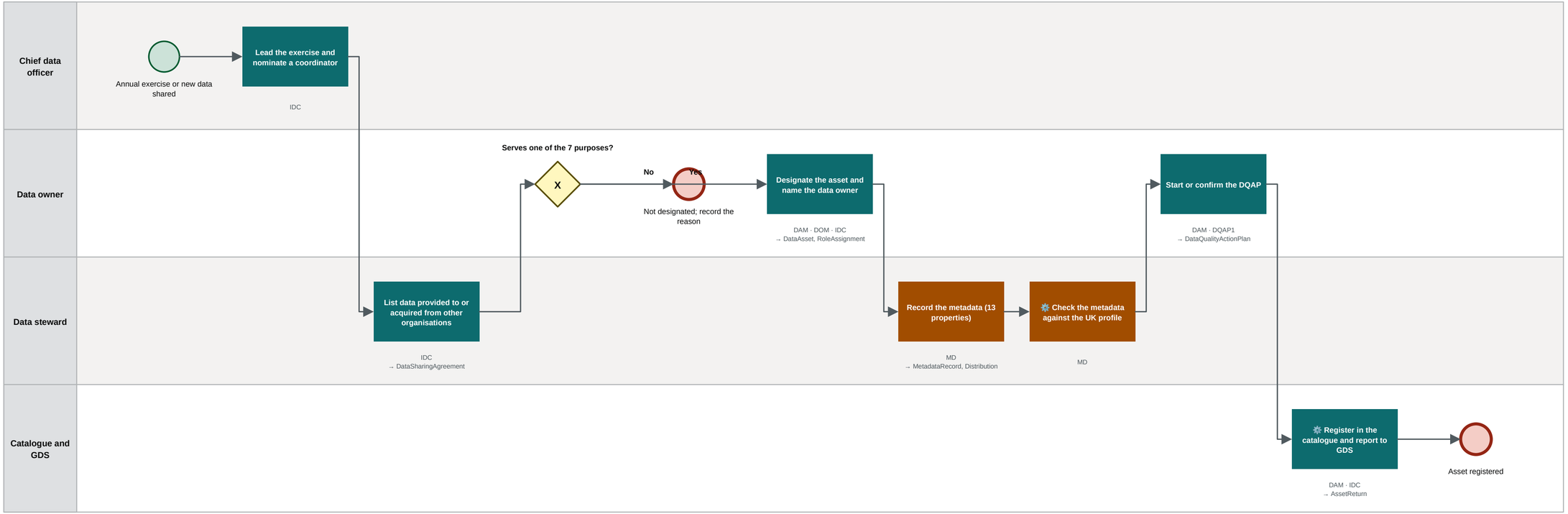
Plan | Collect or acquire and ingest | Prepare, store and maintain | Use and process | Share and publish | Archive or destroy

P1 Identify and register critical data assets

Realises C2 Critical data asset identification. Fill colour shows the GDQF principle; the line under each step shows its guidance and the records it creates (data model entities).

Government Data Quality Framework principles

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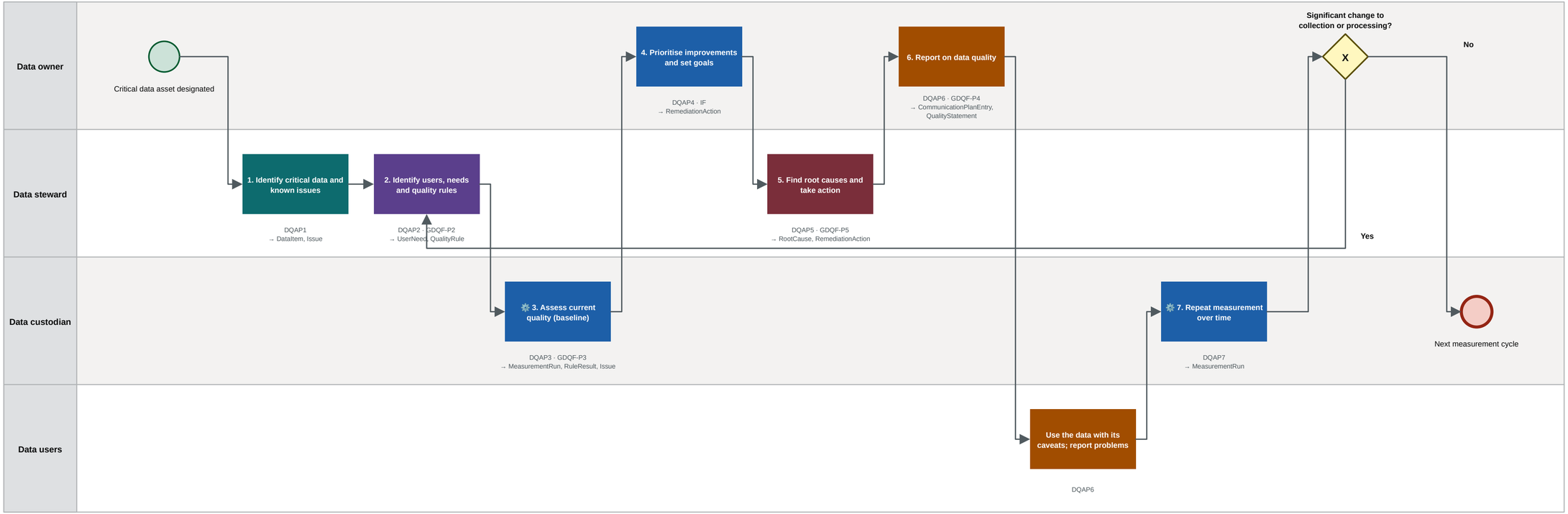
⚙ = automated step (Commons toolkit or scheduled job). Swimlanes are roles from the data ownership model and DQAP guide. Matching BPMN 2.0 file: models/out/bpmn/P1-identify-and-register-critical-data-assets.bpmn

P2 Data quality action plan lifecycle (7 steps)

Realises C5 Rules and standards. Fill colour shows the GDQF principle; the line under each step shows its guidance and the records it creates (data model entities).

Government Data Quality Framework principles

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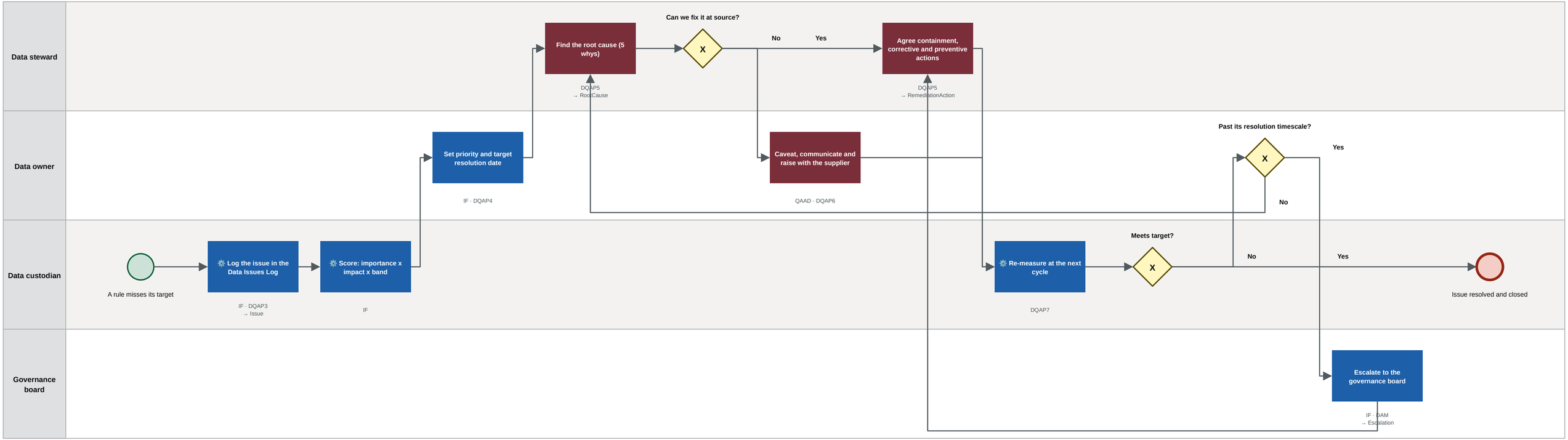
⚙ = automated step (Commons toolkit or scheduled job). Swimlanes are roles from the data ownership model and DQAP guide. Matching BPMN 2.0 file: models/out/bpmn/P2-data-quality-action-plan-lifecycle-7-steps.bpmn

P3 Data quality issue management

Realises C7 Issue management and prioritisation. Fill colour shows the GDQF principle; the line under each step shows its guidance and the records it creates (data model entities).

Government Data Quality Framework principles

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- P3 Assess quality throughout the data lifecycle
- P4 Communicate data quality clearly and effectively
- P5 Anticipate changes affecting data quality



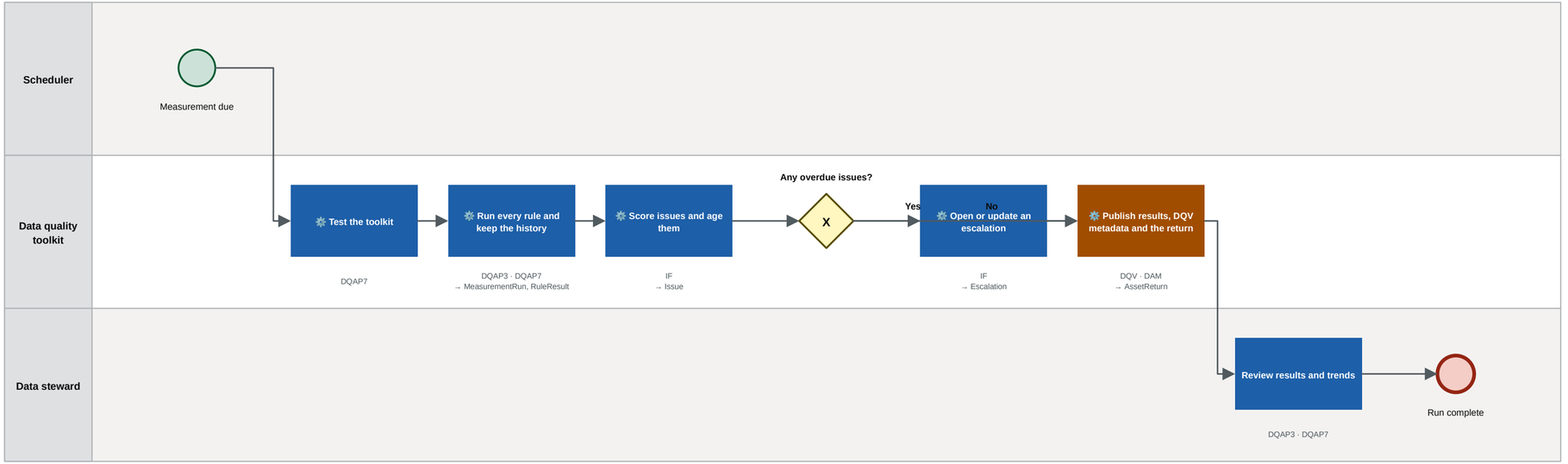
⚙ = automated step (Commons toolkit or scheduled job). Swimlanes are roles from the data ownership model and DQAP guide. Matching BPMN 2.0 file: models/out/bpmn/P3-data-quality-issue-management.bpmn

P4 Scheduled measurement run

Realises C6 Measurement and monitoring. Fill colour shows the GDQF principle; the line under each step shows its guidance and the records it creates (data model entities).

Government Data Quality Framework principles

- P1 Commit to data quality
- P2 Know your users and their needs
- P3 Assess quality throughout the data lifecycle
- P4 Communicate data quality clearly and effectively
- P5 Anticipate changes affecting data quality



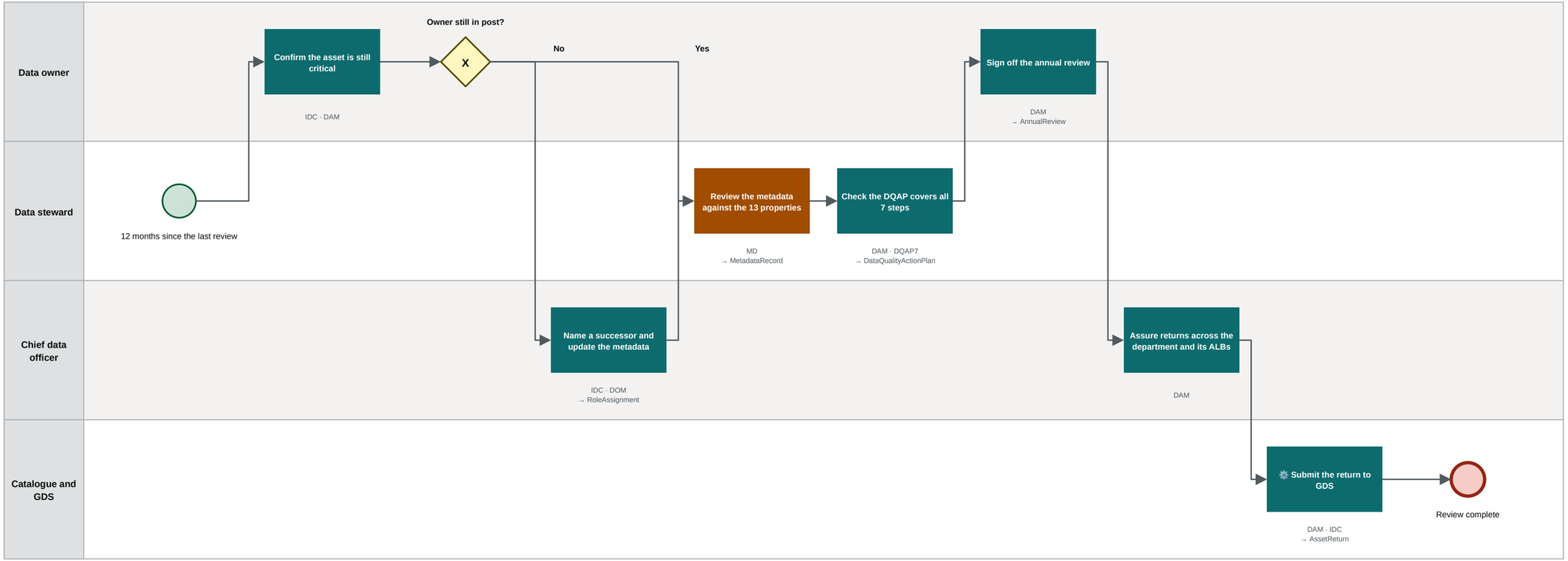
⚙️ = automated step (Commons toolkit or scheduled job). Swimlanes are roles from the data ownership model and DQAP guide. Matching BPMN 2.0 file: models/out/bpmn/P4-scheduled-measurement-run.bpmn

P5 Annual review and return

Realises C10 Assurance and review. Fill colour shows the GDQF principle; the line under each step shows its guidance and the records it creates (data model entities).

Government Data Quality Framework principles

- P1 Commit to data quality
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- P3 Assess quality throughout the data lifecycle
- P4 Communicate data quality clearly and effectively
- P5 Anticipate changes affecting data quality



⚙ = automated step (Commons toolkit or scheduled job). Swimlanes are roles from the data ownership model and DQAP guide. Matching BPMN 2.0 file: models/out/bpmn/P5-annual-review-and-return.bpmn

Information architecture: the records the capability keeps, grouped by area, with the guidance each implements

Full attributes, types and relationships: models/out/dictionary/data-dictionary.csv, the ERD, SQL, UML, JSON Schema and OWL exports.

Governance

Organisation

5 attributes · DAM IDC

RoleAssignment

8 attributes · DOM DAM IDC DQAP1

Asset and metadata

DataAsset

19 attributes · DAM IDC MD DOM

Distribution

5 attributes · MD DCAT

DataSharingAgreement

6 attributes · IDC DOM QAAD

MetadataRecord

7 attributes · MD GDQF-P4 DCAT

Requirements

DataItem

6 attributes · DQAP1

UserNeed

5 attributes · GDQF-P2 DQAP2

DataQualityActionPlan

8 attributes · DAM DQAP1 DQAP7 GDQF-P1

Measurement

QualityRule

13 attributes · DQAP2 IF GDQF-D

MeasurementRun

8 attributes · DQAP3 DQAP7 GDQF-P3

RuleResult

9 attributes · DQAP3 IF DQV

Issue management

Issue

14 attributes · IF DQAP3 DQAP4

RootCause

8 attributes · DQAP5 GDQF-P5

RemediationAction

11 attributes · DQAP4 DQAP5

Escalation

5 attributes · IF DAM

Reporting

CommunicationPlanEntry

8 attributes · DQAP6 GDQF-P4

QualityStatement

8 attributes · DQAP6 GDQF-P4 COP

Assurance

AssetReturn

6 attributes · DAM IDC

AnnualReview

8 attributes · DAM IDC DOM DQAP7

Requirement

5 attributes · DAM DQAP GDQF

MaturityAssessment

5 attributes · GDQF-P1

Guidance key: the codes used on every page

DAM	Data asset management policy in government	https://www.gov.uk/government/publications/data-asset-management-policy-in-government/data-asset-management-policy-in-government
IDC	Identifying and recording critical data assets	https://www.gov.uk/government/publications/identify-and-record-critical-data-assets/identifying-and-recording-critical-data-assets
MD	Recording metadata to describe critical data assets	https://www.gov.uk/government/publications/record-metadata-to-describe-critical-data-assets/recording-metadata-to-describe-critical-data-assets
DOM	Data ownership model	https://www.gov.uk/government/publications/data-ownership-in-government/data-ownership-model
DQAP	Data quality action plan: implementation guide	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
IF	Data quality issues framework	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-issues-framework
GDQF	The Government Data Quality Framework	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
COP	Code of Practice for Statistics	https://osr.statisticsauthority.gov.uk/publications/the-code-of-practice-for-statistics/
QAAD	Quality assurance of administrative data	https://osr.statisticsauthority.gov.uk/guidance/administrative-data-and-official-statistics/
ICO	UK GDPR accuracy principle (ICO guidance)	https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/data-protection-principles/a-guide-to-the-data-protection-principles/accuracy/
DQAP1	DQAP implementation guide, step 1	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP2	DQAP implementation guide, step 2	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP3	DQAP implementation guide, step 3	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP4	DQAP implementation guide, step 4	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP5	DQAP implementation guide, step 5	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP6	DQAP implementation guide, step 6	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
DQAP7	DQAP implementation guide, step 7	https://www.gov.uk/government/publications/implement-a-data-quality-action-plan/data-quality-action-plan-implementation-guide
GDQF-P1	GDQF principle: Commit to data quality	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-P2	GDQF principle: Know your users and their needs	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-P3	GDQF principle: Assess quality throughout the data lifecycle	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-P4	GDQF principle: Communicate data quality clearly and effectively	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-P5	GDQF principle: Anticipate changes affecting data quality	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-LC	GDQF data lifecycle	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
GDQF-D	GDQF data quality dimensions	https://www.gov.uk/government/publications/the-government-data-quality-framework/the-government-data-quality-framework
DCAT / DQV	W3C Data Catalog Vocabulary 3 / Data Quality Vocabulary	https://www.w3.org/TR/vocab-dcat-3/

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