

Evidence Update and Decision Loss Matrix

Executive Pathway Module 3 decision tool

Use this record to turn incomplete evidence into a reviewable recommendation. It separates beliefs from consequences, reveals reversals and preserves the final decision for a named human authority.

Decision	
Accountable owner	
Decision date	
Review date	
Sector	

1 Decision boundary

Field	Executive record
Decision to be made	
Permitted actions	ACT / PILOT / WAIT AND LEARN / ESCALATE / Other:
Time horizon	
Affected groups	
Hard constraints	Rights, law, safety, mandate or resource limits that cannot be traded away

2 States and prior beliefs

State	Description	Prior probability	Source and date
S1			
S2			
S3			
Omitted state check			

3 Evidence update

Evidence item	Quality and independence	P evidence given state	Updated belief	Limitations
E1				
E2				
E3				

Posterior calculation

For each state: posterior weight = prior probability x likelihood of observed evidence. Normalize the weights so that they sum to 1.

State	Prior	Likelihood	Joint weight	Posterior	Credible range
S1					
S2					
S3					

4 Decision loss matrix

Enter the consequence of each action under each state. Lower values mean lower loss. Keep non-compensable constraints outside the numerical aggregation.

Action	Loss under S1	Loss under S2	Loss under S3	Posterior expected loss	Constraint status
ACT					
PILOT					
WAIT AND LEARN					
ESCALATE					

5 Sensitivity and reversal analysis

Assumption varied	Credible range	Reversal point	Action after reversal	Owner response
Prior				
Likelihood				
Loss value				
Missing state				

6 Value of additional information

Prospective evidence	Expected decision improvement	Acquisition cost	Delay cost	Net value	Acquire
					Yes / No
					Yes / No

7 Distribution and safeguards

Affected group	Benefit	Potential loss	Right or safeguard	Monitoring indicator

Evidence quality questions

- Is the evidence conditionally independent, or does it repeat the same underlying signal?
- Could measurement error, selection, incentives or reporting delay distort the likelihood?
- Which plausible state or affected group remains outside the model?

8 Executive recommendation and authorization

Decision field	Recorded conclusion
Analytical preference	
Expected loss advantage	
Robustness	Stable / fragile / unresolved
Recommended outcome	ACT / PILOT / WAIT AND LEARN / ESCALATE
Conditions and safeguards	
Monitoring and review trigger	
Exit or reversal rule	

Human authorization

Authorized outcome	
Authorizing officer	
Role and mandate	
Signature	
Date	

Decision discipline

A posterior probability is not a decision. The recommendation becomes defensible only when the evidence model, loss assumptions, hard constraints, affected groups, reversal conditions and accountable authority are all visible.