

Lifecycle Evidence and Systems Decisions

g11_u08_w32

Purpose and boundary

Use original fictional lifecycle tables only. No purchasing, material handling, disposal, policy, consumer, or regulatory decision is requested.

Targets: I can compare a stated lifecycle boundary, calculate a simple total, and explain why data do not determine a single decision. **Vocabulary:** lifecycle, boundary, allocation, tradeoff, uncertainty, stakeholder. **Prerequisites:** systems, process metrics, evidence claims, addition and percentages.

All values are fictional model values. A total within a table is not a real product or policy recommendation.

1. Define a lifecycle boundary in a systems-model context.

2. Why can two lifecycle tables disagree while both use correct arithmetic?

3. What does allocation mean when a model has more than one output?

4. Card A lists stage values 12, 8, 5, 3 units. Find the total.

5. Card B lists stage values 9, 10, 4, 4 units. Find the total.

6. Compare totals from items 4–5 under the stated shared units.

7. Which stage is largest for Card A? What is one bounded inference?

8. Why does a largest stage not automatically identify the best intervention?

9. A card omits an end-of-life stage. Name one boundary limitation.

10. Explain why an average lifecycle value can hide range or distribution.

11. Card C total is 30 units with 18 units assigned to one stage. Find that stage percentage.
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12. Card D total is 24 units with 6 units assigned to one stage. Find that percentage.
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13. Compare the two stage shares and one missing comparison condition.
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14. A student says lower total means universally better. Correct the claim.
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15. Name two other decision criteria that a lifecycle total may omit.
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16. Why can stakeholder priorities change a decision even with the same table?
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17. A table lists one total but no uncertainty. What question should a reader ask?
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18. State one supported and one unsupported claim from Card A versus B.
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19. Propose one more data column that would reduce ambiguity in a fictional table.
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20. Write a two-sentence bounded systems conclusion that includes a tradeoff and a missing condition.
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