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Process Tools and Leading Indicators for Performance Measurement

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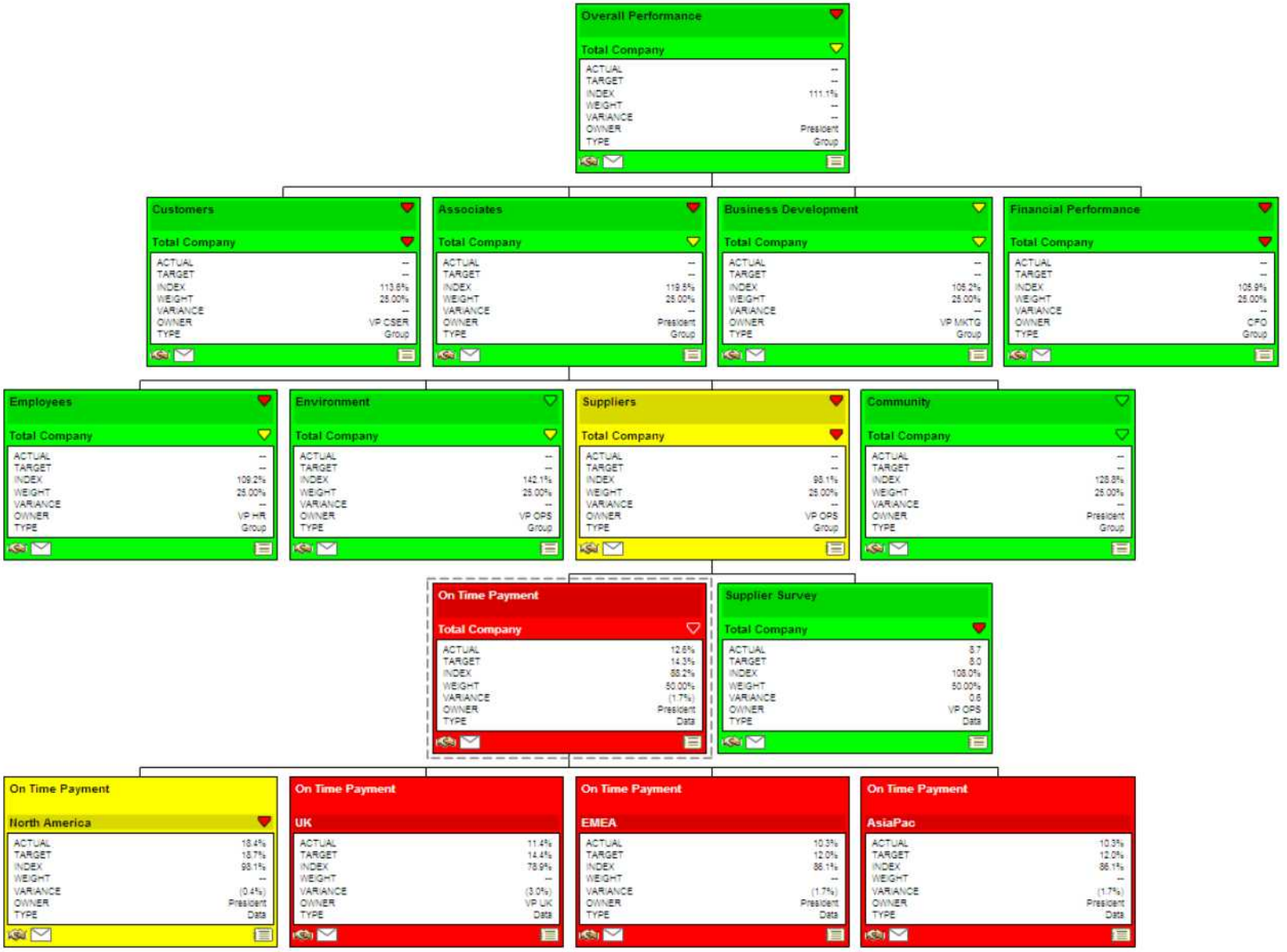
Performance Measure Structure Example



Performance Information

Some Performance Measurement System Considerations

- Number of performance measures
- Diversity of structure
- Number of users
- Reporting needs
  - Paper, online or both
- Analysis needs
  - Simple or complex?
- Web or email delivery of performance information?
- Budget
  - Initial cost, licensing and maintenance

Some Performance Measurement Tools

- Actuate BIRT Scorecard 9
  - Turnkey database configuration
- Microsoft PerformancePoint Server
  - Very powerful, but building from scratch required
- Enterprise Resource Planning (ERP) systems
  - May only cover financial measures
- Spreadsheets
  - Low cost, but limited capability

Narrowing the Selection

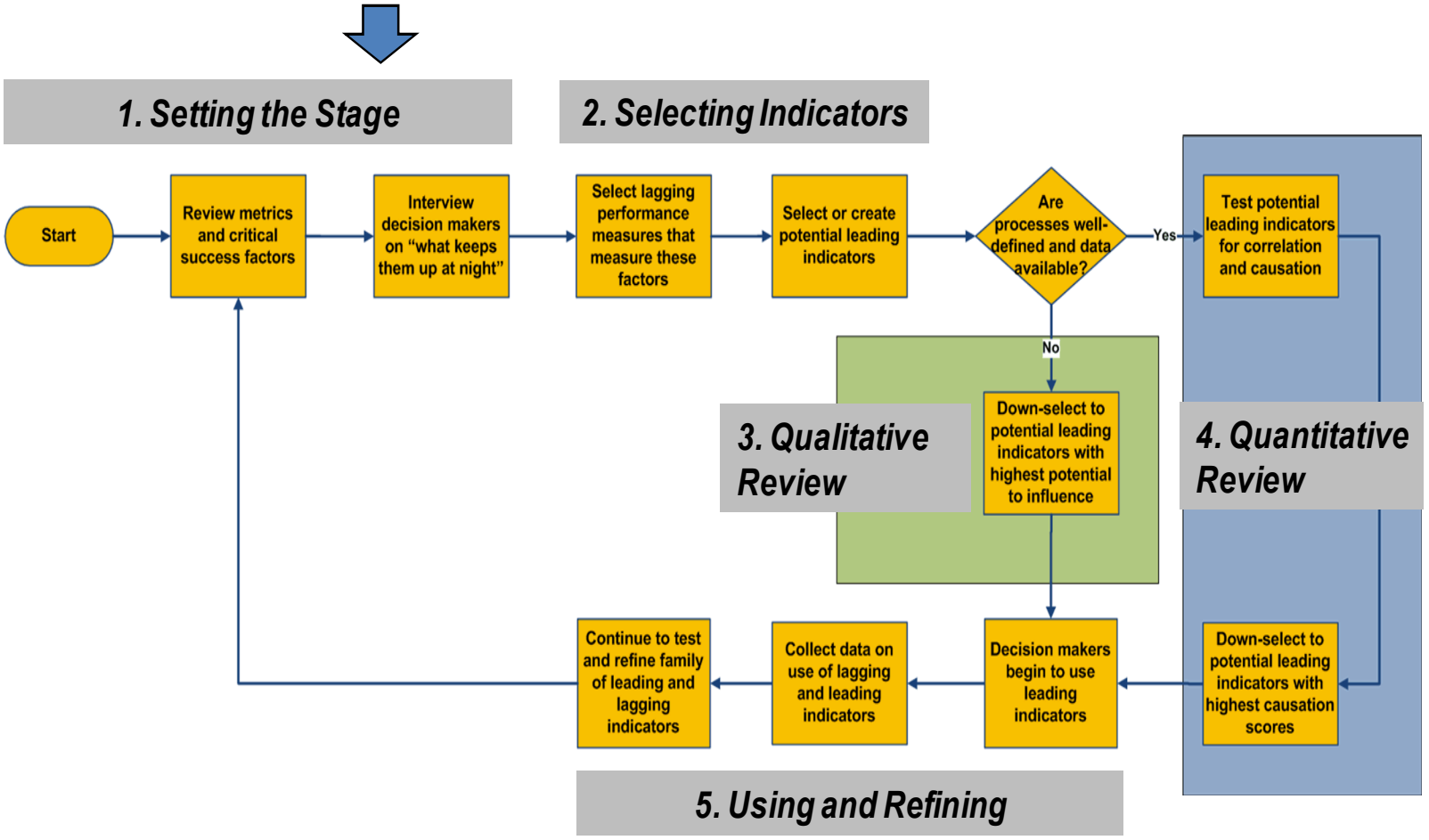
- A critical few performance measures are better than picking everything that you *can* measure
  - One CEO looks at Accounts Receivable aging and on-time delivery metrics each day
- Define what you want to measure, and its structure, without being influenced by the tools
  - You want a tool that works for you, not the other way around
- Consider a Performance Measurement Workshop if you don't already have the expertise in-house
  - Reinforces the likelihood that you'll pick more of what you *should* measure

Leading Indicator Considerations

Principles of Leading Indicators

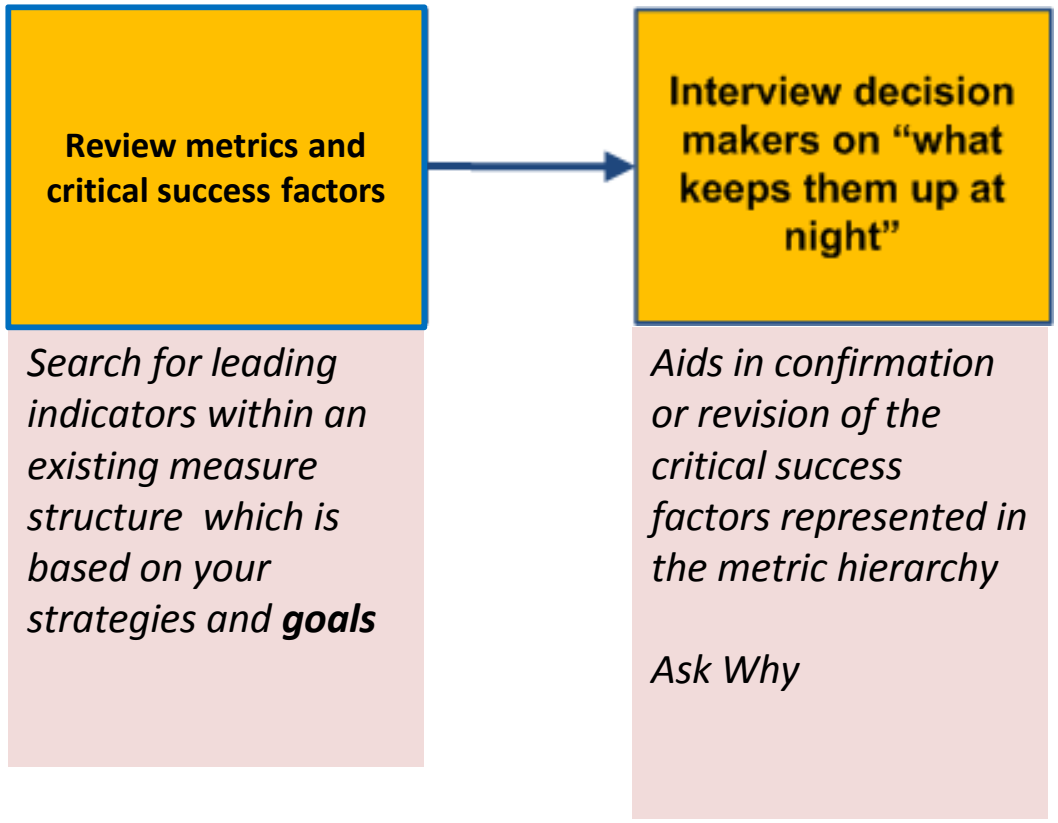
- **Predictive of future performance and able to proactively influence that performance**
- **May themselves be lagging indicators**
- **Demonstrate a "cause-and-effect" relationship with a particular outcome: the "knobs" that we can turn**
- **Can't exist in isolation – decision makers need to use them in order to influence an outcome**
- **Often attached to inputs for processes**
- **Leading indicators need only be developed for measures that truly matter to an organization**

Process Flow for Leading Indicator Development and Use



Process Flow for Leading Indicator Development and Use

1. Setting the Stage



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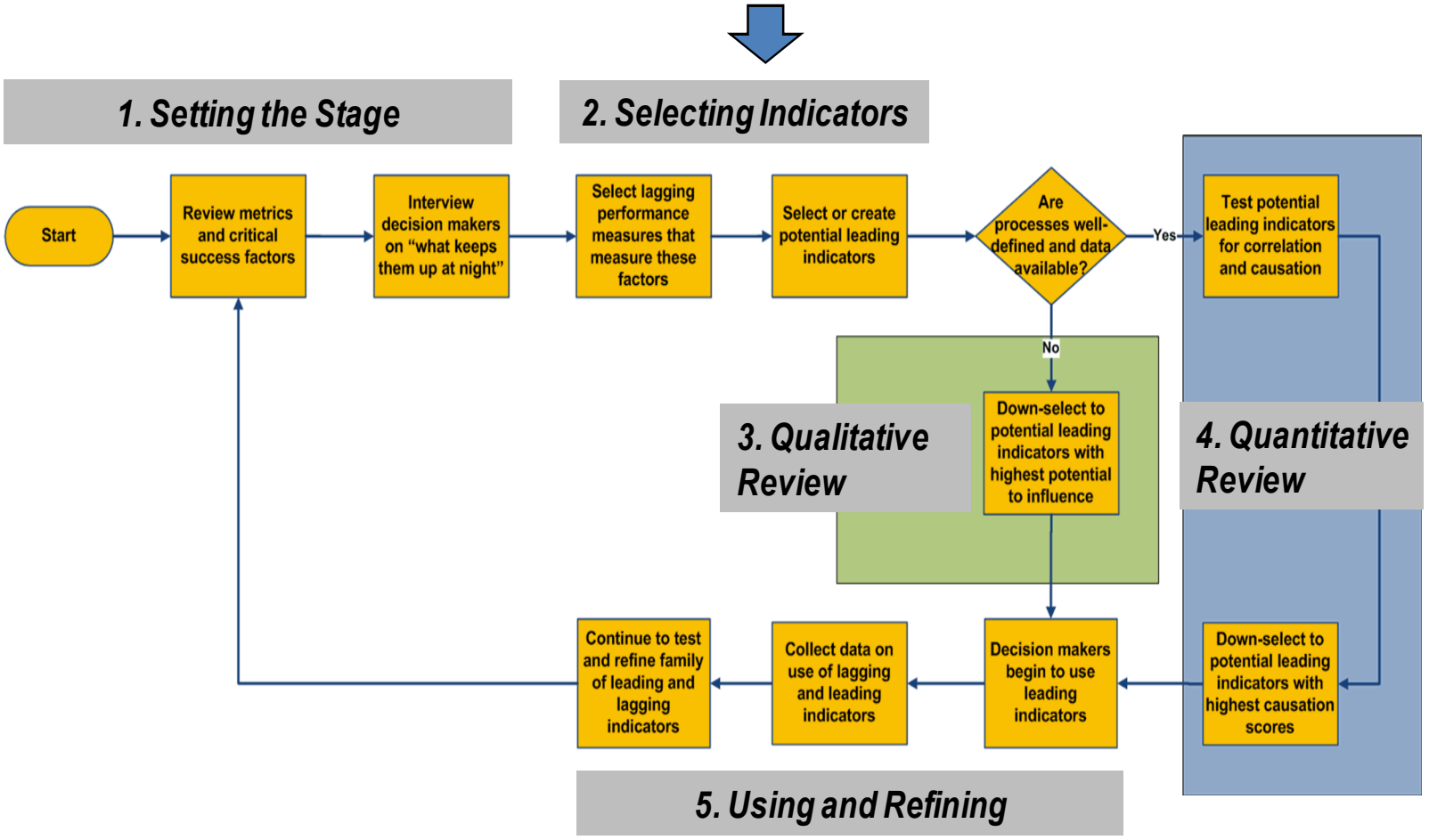

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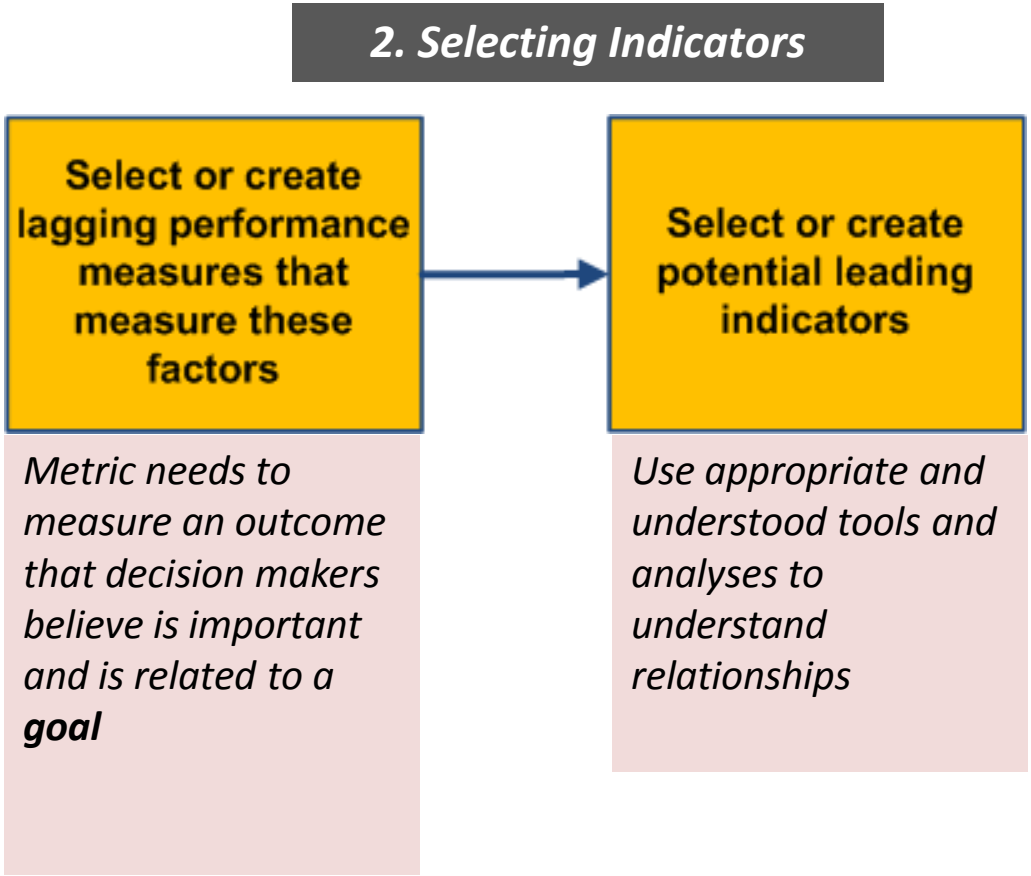

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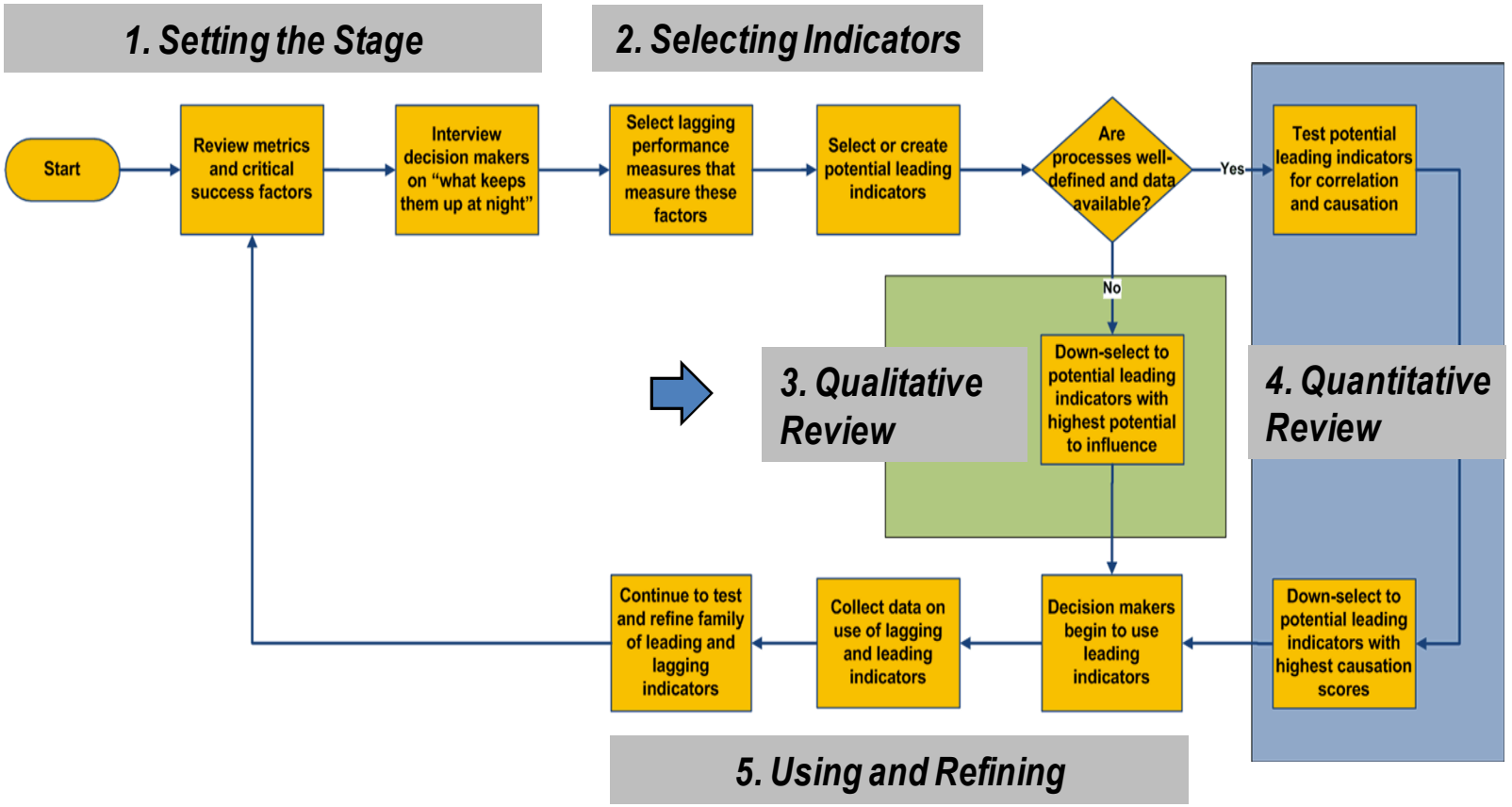
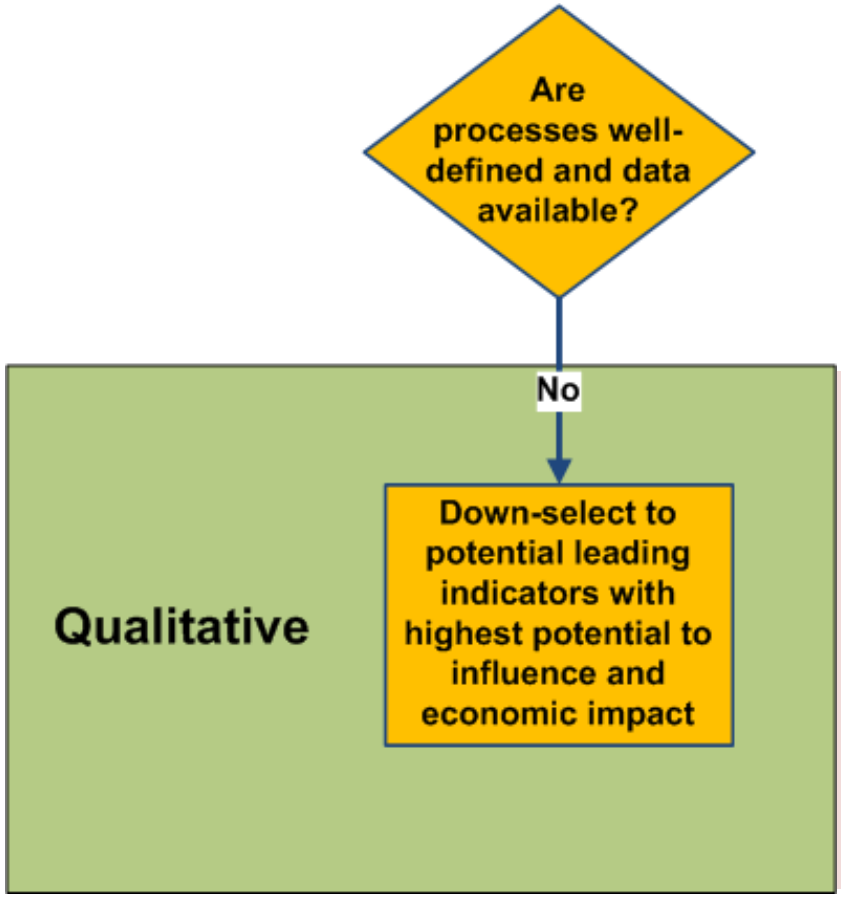


Process Flow for Leading Indicator Development and Use

3. Qualitative Review

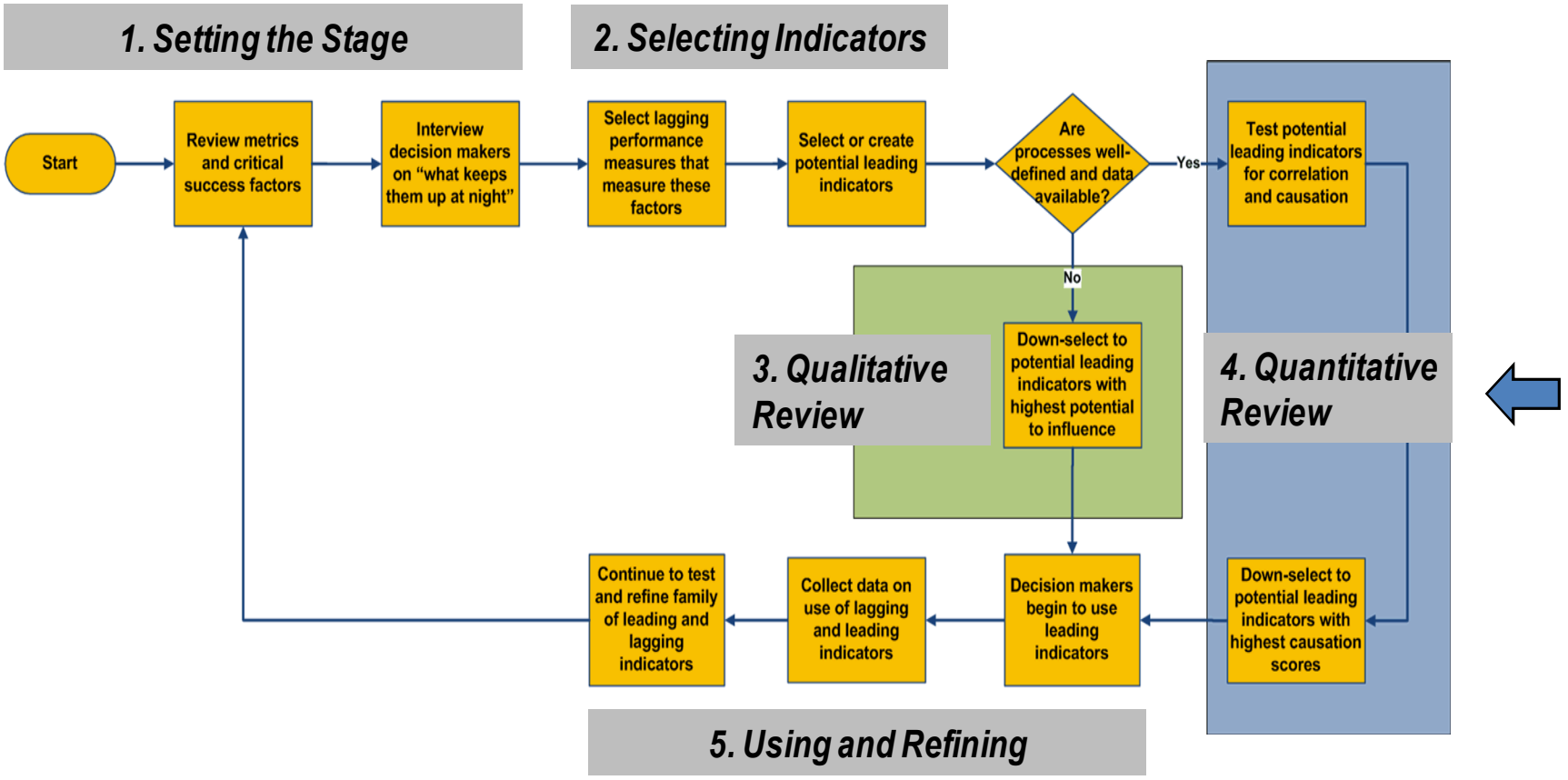


Frame the proposed metrics to assist the selection process by using a systematic approach such as the SMART (Specific, Measurable, Achievable, Relevant, and Time-Framed) criteria.

Assemble a team with sufficient specialized knowledge , expertise and authority to make judgments. Include members with expertise in cost estimation and implementation

Never lose site of the goal

Process Flow for Leading Indicator Development and Use



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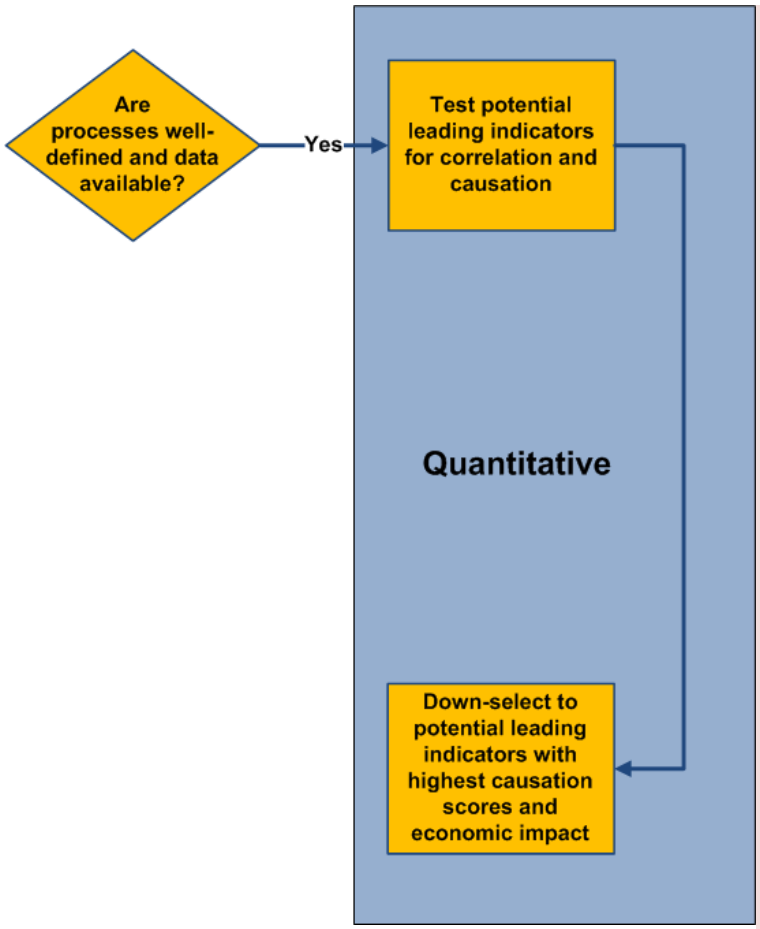

Assemble data and trend information on the outcome (lagging indicators) and selected causes (leading indicators)

Select an appropriate analysis method that takes into account the nature of the data, the necessary accuracy and precision, the cost ***AND*** *your analysis expertise*

Review your analysis structure and assumptions with the owner of the outcome and ,if warranted , with senior leaders

Never lose site of the ***goal***

Correlation and Causality

- **Correlation measures the degree of association between two variables. It is not a true measurement of causality: two variables can be highly correlated without being causally linked. An everyday example is alarm clocks ringing and roosters crowing. There is a high degree of correlation between the two data sets, but no causal relationship.**

- **Causality is the relationship of two events. The first event is known as *the cause* and the second event is known as *the effect* and is presumed to be the consequence of the first event. Causality is not limited to events but can incorporate objects, processes, facts, properties and variables.**

Granger causality and PMM

"We find minimal statistical significance and no significant predictive ability in the model (i.e., no Granger causality), yet the company and its distributors express satisfaction with the model and with both company and distributor profitability. Reasoning that cause and effect was not the only explanation for scorecard success, we thoroughly analyze qualitative data for how managers perceived and used (a) the relations in the scorecard and (b) the climate of control intended and achieved in the organization through the scorecard. We find that the PMM's logical and finality relations support the company's climate of control. We also find qualitative evidence that the use of the PMM creates an effective climate of control. **We tentatively conclude that effective management control does not require statistically significant cause-and-effect relations in a PMM when other factors create a strong climate of control**."

Climate of Control: The "climate of control" (aka desired behavior) reflects the company's environment, style of management and institutional and social cultures

Logical relations: Logical relations exist by human construction or definition, and may be common elements of PMM. They are the results of related human constructs, such as mathematics, language, and accounting

Finality relations: A finality relation exists when (a) one believes that a given action is the best or most desired means to an end, and (b) the belief, desire, action and end are related by custom, policy, or values. Actions driven by finality are performed because the actions conform to the beliefs and wishes of a person (or group).

Mary A. Malina, Hanne S. O. Nørreklit and Frank H. Selto. *Relations among Measures, Climate of Control and Performance Measurement Models.* Contemporary Accounting Research, 2006.

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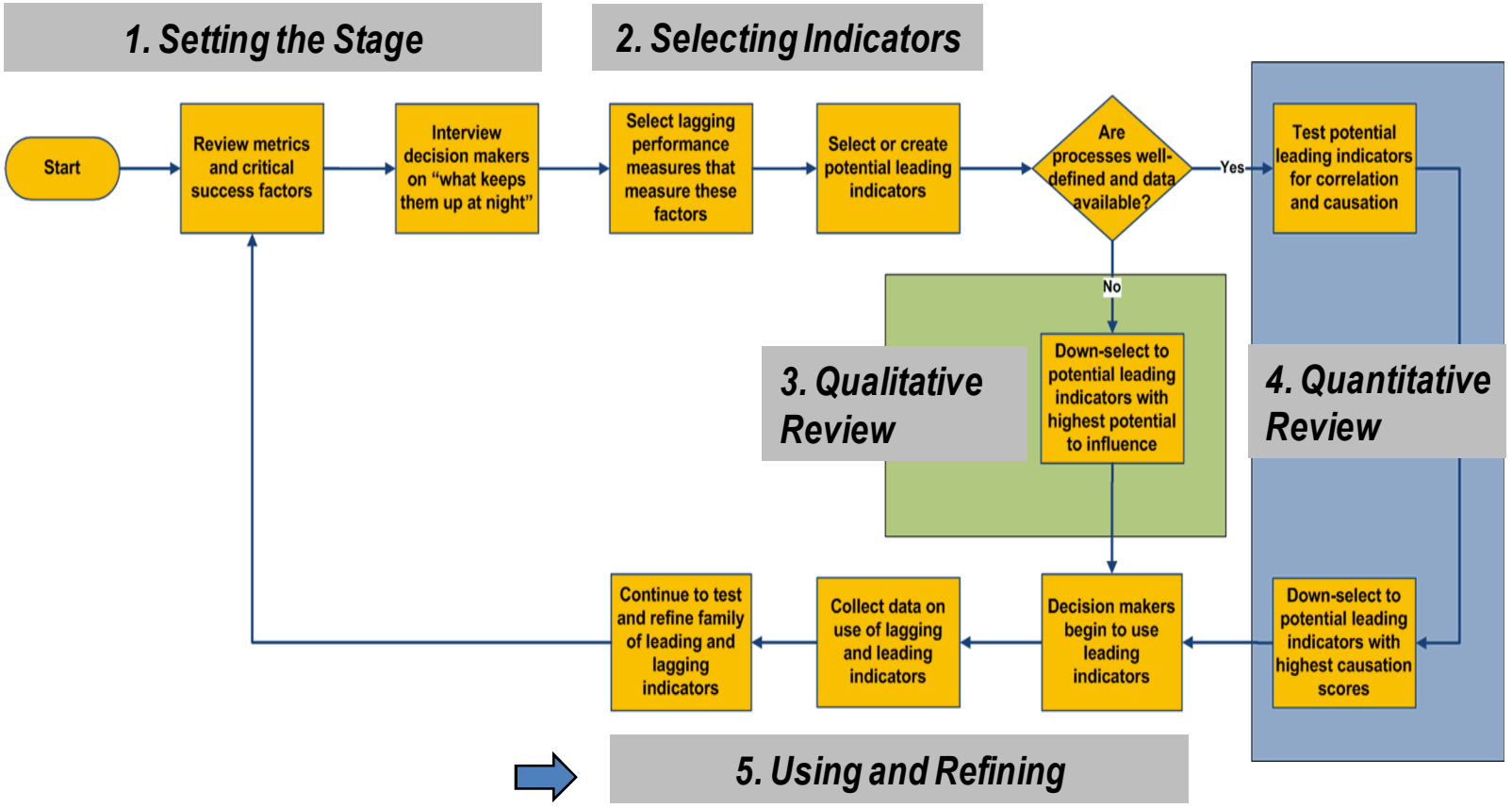

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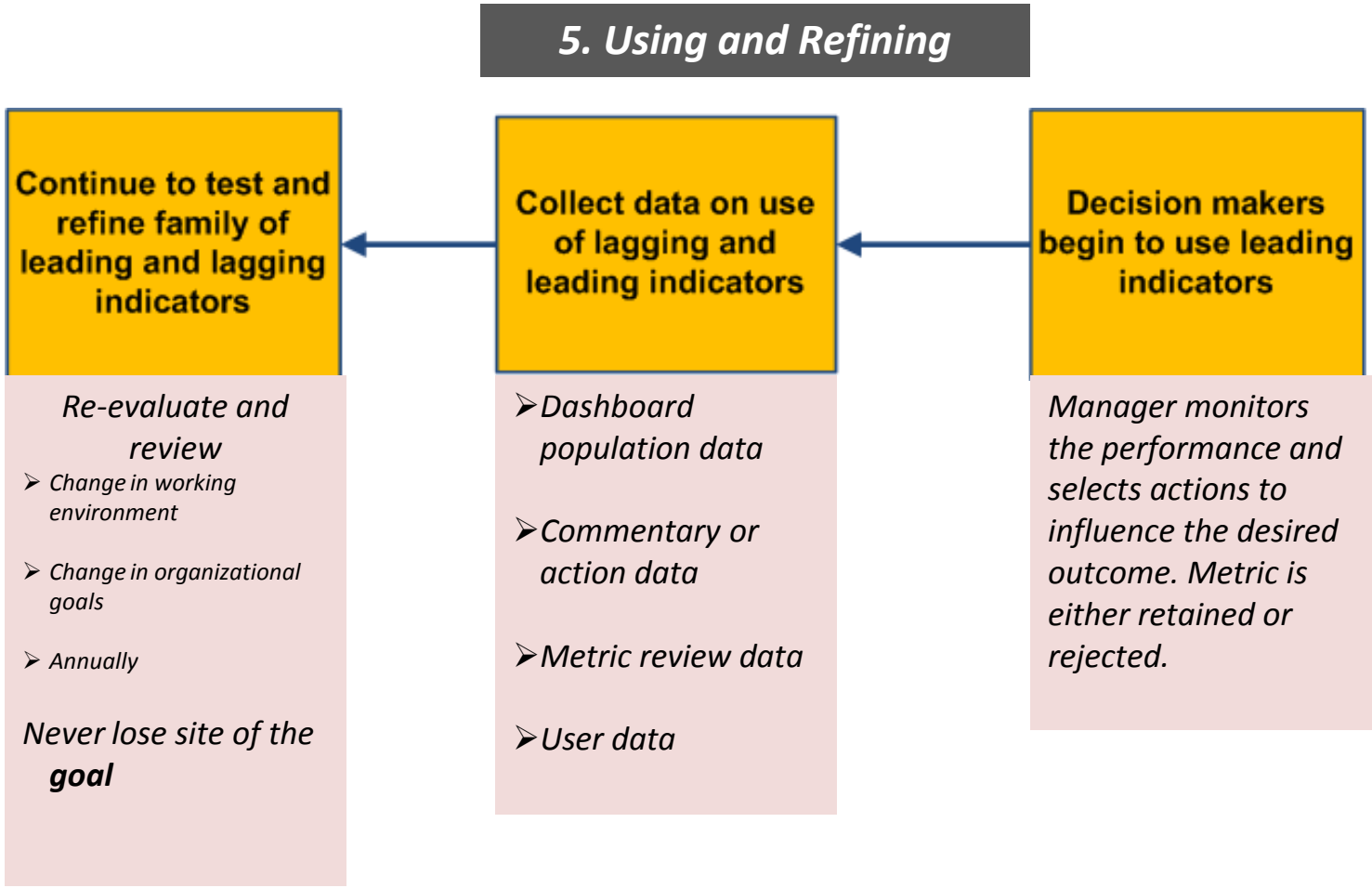

Conclusions

- Leading indicators
  - An iterative process for identifying leading indicators has been defined
  - Business models not only govern desired outcomes but also control leading indicators
  - Indicators may be more useful in driving desired behavior than in predicting performance
- Metrics need sustained care and feeding
  - Metrics need to be reviewed and re-evaluated,
  - Metrics need to consider potential outcomes
  - Metrics need to be related to goals
  - Metrics need to be used
- Metrics need to be a dynamic and integrated aspect of conducting business
  - Does this metric represent what management considers important?
  - Are there better ways of representing success or risk?
  - What type of causal analysis, logic evaluation, or thought process produced the metric?
  - Has the organization brought together those stakeholders who can analyze performance and provide the best insights?