

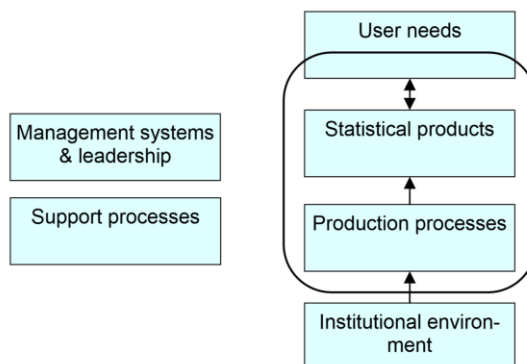
Module 3

Material jointly developed by the faculty, adjuncts and students at the Michigan and Maryland Programs in Survey Methodology (MPSM/JPMS)

Thanks to D.Cantor, F.Conrad, M.Couper, R. Groves
F. Keusch, R. Tourangeau ... and many more

EUROSTAT: Handbook on Data Quality Assessment Methods and Tools

Elements of a quality management system



Corresponding principles from the European Statistics Code of Practice

Relevance, accuracy and reliability, timeliness and punctuality, coherence and comparability, accessibility and clarity

Sound methodology, appropriate statistical procedures, non-excessive burden on respondents, cost effectiveness

Professional independence, mandate for data collection, adequacy of resources, quality commitment, statistical confidentiality, impartiality and objectivity

Overall Quality Assessment

Accuracy	Total survey error is minimized.
Credibility	Data are considered trustworthy by the survey community .
Comparability	Demographic, spatial, and temporal comparisons are valid.
Usability	Documentation is clear and metadata are well-managed.
Relevance	Data satisfy user needs.
Accessibility	Access to the data is user-friendly.
Timeliness	Data deliveries adhere to schedules.
Completeness	Data are rich enough to satisfy the analysis objectives without undue burden on respondents.
Coherence	Estimates from different sources can be reliably combined.

Source: Biemer, POQ 74 (5): 819, 2010

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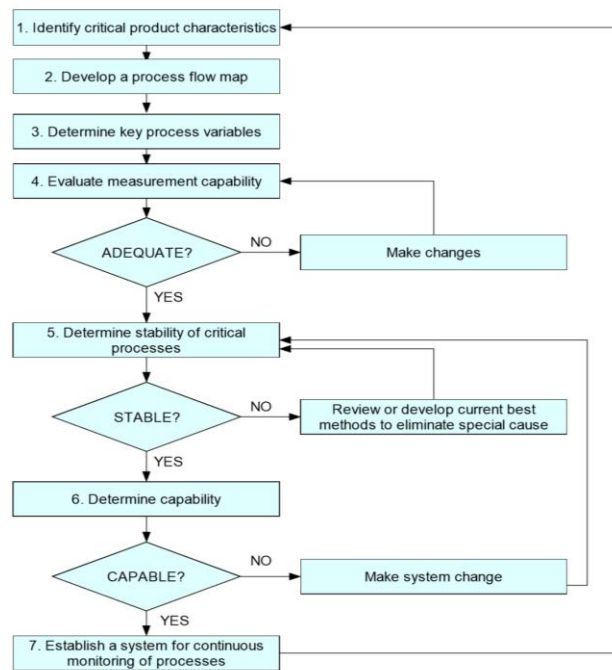
Continuous Quality Improvement

1. Prepare a workflow diagram of the process + identify **key process variables**.
2. Identify characteristics of the process that are critical to quality.
3. Develop real-time, **reliable metrics** for the cost and quality of each.
4. Verify that the **process is stable** (i.e., in statistical control) and capable (i.e., can produce the desired results).
5. Continuously **monitor costs and quality** metrics during the process.
6. Intervene as necessary to ensure that quality and costs are within acceptable limits.

Source: Biemer, POQ 74 (5): 832, 2010

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CQI



Source: Morganstein and Marker 1997