# The Tailoring Dilemma

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# The Tailoring Dilemma

- **CMMI tries to balance flexibility with consistency in adapting an organization's set of standard practices to a project. Decisions are at the project level per guidelines.**
- **The typical corporate approach stresses commonality and high level approvals of changes.**
- **The Dilemma: How to balance commonality and corporate control with project flexibility and low-level decisions**
- ***This is a "Money" process -***
  - ***Do it right, and you maximize value***
  - ***Do it wrong, and you have waste and inefficiency***

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# The Tailoring Dilemma

- The CMMI approach to Tailoring is that a standard set of processes must be tailored (adjusted by additions, elaborations, deletions, or changes) to fit the needs of a project
- The Corporate approach for most large companies (and many others) is to have a standard set of processes that cannot be changed or deleted except via a rigorous approval and documentation process
- CMMI favors management of processes close to where the work is done
- The Corporate approach favors moving more of the process management to a high level, central area
- These differences need to be reconciled for both sets of objectives to be met

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# Recognition of Certain Factors

- **Solving the dilemma requires recognition of a number of factors, and then developing solutions that satisfy (or at least consider) each**
  - **Not all processes do the same kind of thing**
    - **Some tell how to do work, such as the typical engineering process**
    - **Some control business requirements, such as use of specific clauses in subcontracts**
    - **Different departments/ functions may have different needs**
  - **May require different treatment of additions/ elaborations, changes, and deletions, and different disciplines**
  - **Even with good, approved tailoring guidelines, may need to divide tailoring decisions between Project Process Group and corporate management**

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# Authority based on trust *and* guidelines

- **CMMI provides for tailoring based on guidelines approved by management steering group**
- **Corporations delegate authority in constrained ways, based in large part on trusting those given the authority**
  - **Experience and track record of individuals**
  - **Processes to control individuals/ incentives to follow direction**
  - **Tiers of authority, size of projects, dollar value, risk**
  - **Number of processes in an area/ number of tailoring decisions**
  - **Domain & department differences – e.g., software vs. hardware, engineering vs. finance**

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# Project Variation a factor

- **Commercial vs. Defense and Space projects**
  - **Commercial often to internal standards, so less need to recognize project differences**
  - **Defense and Space often have more project and customer variation, more need to tailor to recognize differences**
    - **Different products have different risk levels (manned space vs. legacy aircraft designs or ground equipment)**
    - **Spiral vs. waterfall development**
    - **“Clean sheet of paper” vs. legacy projects**
    - **Team stability, experience together can vary**

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# Cultural and Individual Differences

- **Many companies now comprised of parts with different backgrounds**
  - **Some have culture of micro-managing, little trust**
  - **Some delegate considerable authority, great trust**
  - **Some like process detail, some do not**
  - **Some are highly disciplined, some are not**
  - **Some have lots of work; some do not, and protect their "rice bowls"**
  - **Some have experienced workforce, some have beginners**
- **Executives approving corporate approach to tailoring are influenced by their own backgrounds, in addition to those of their corporation's component parts**

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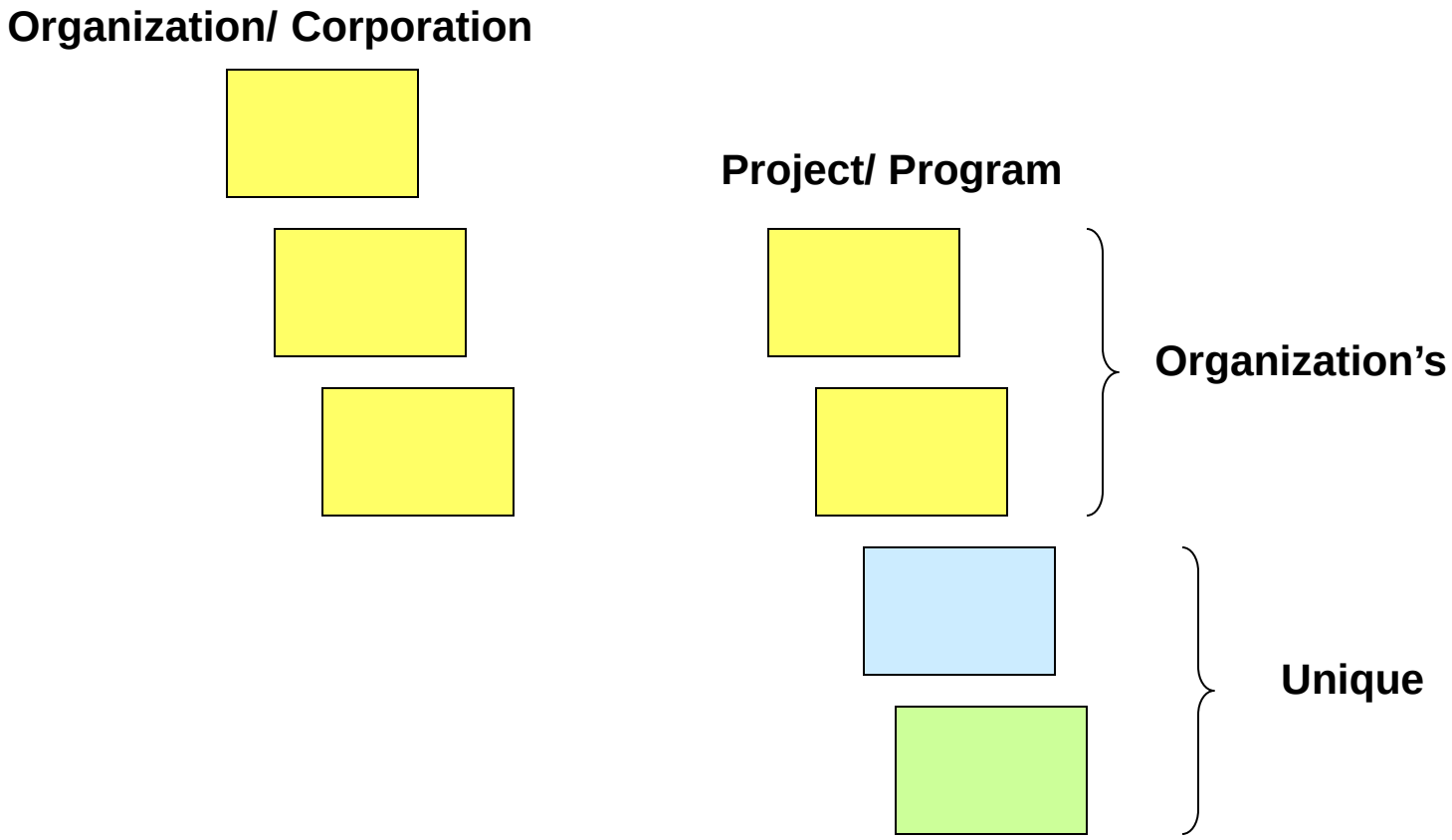
# Tailoring Documentation Differences

- **Typical Process Architecture – Before Tailoring**

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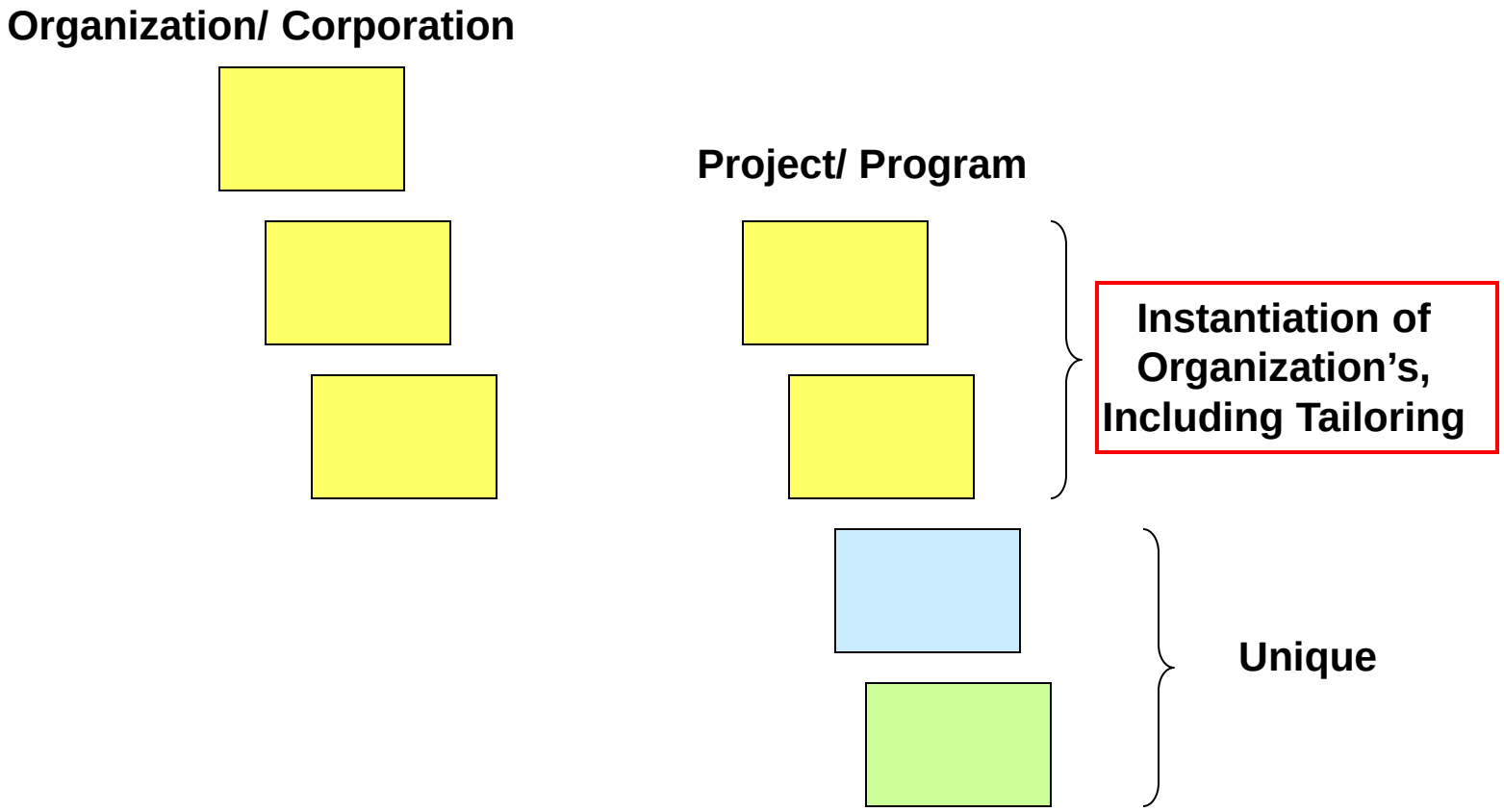
# Tailoring Documentation Differences

- **Typical Process Architecture – After Tailoring - #1**

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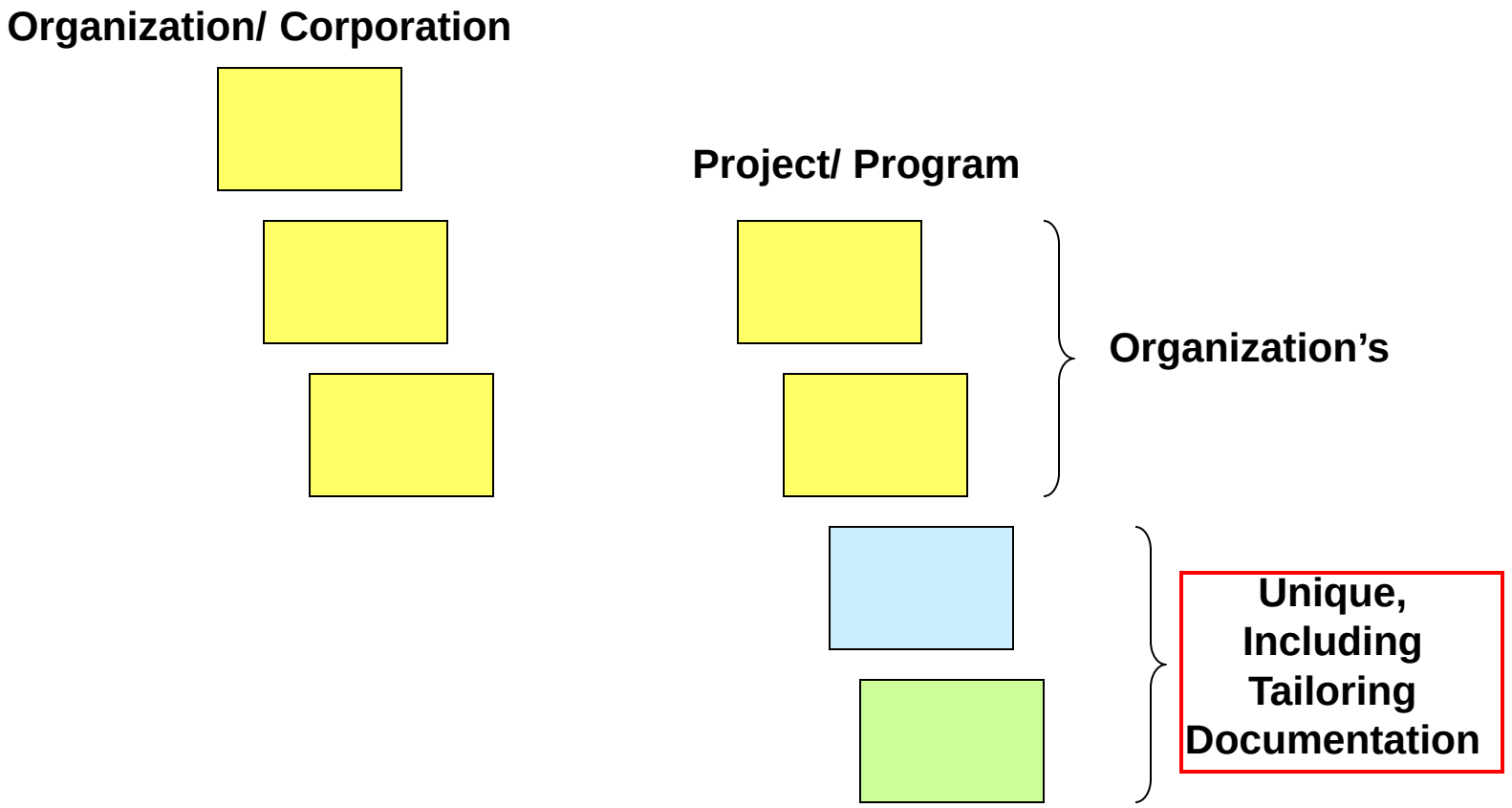
# Tailoring Documentation Differences

- **Typical Process Architecture – After Tailoring - #2**

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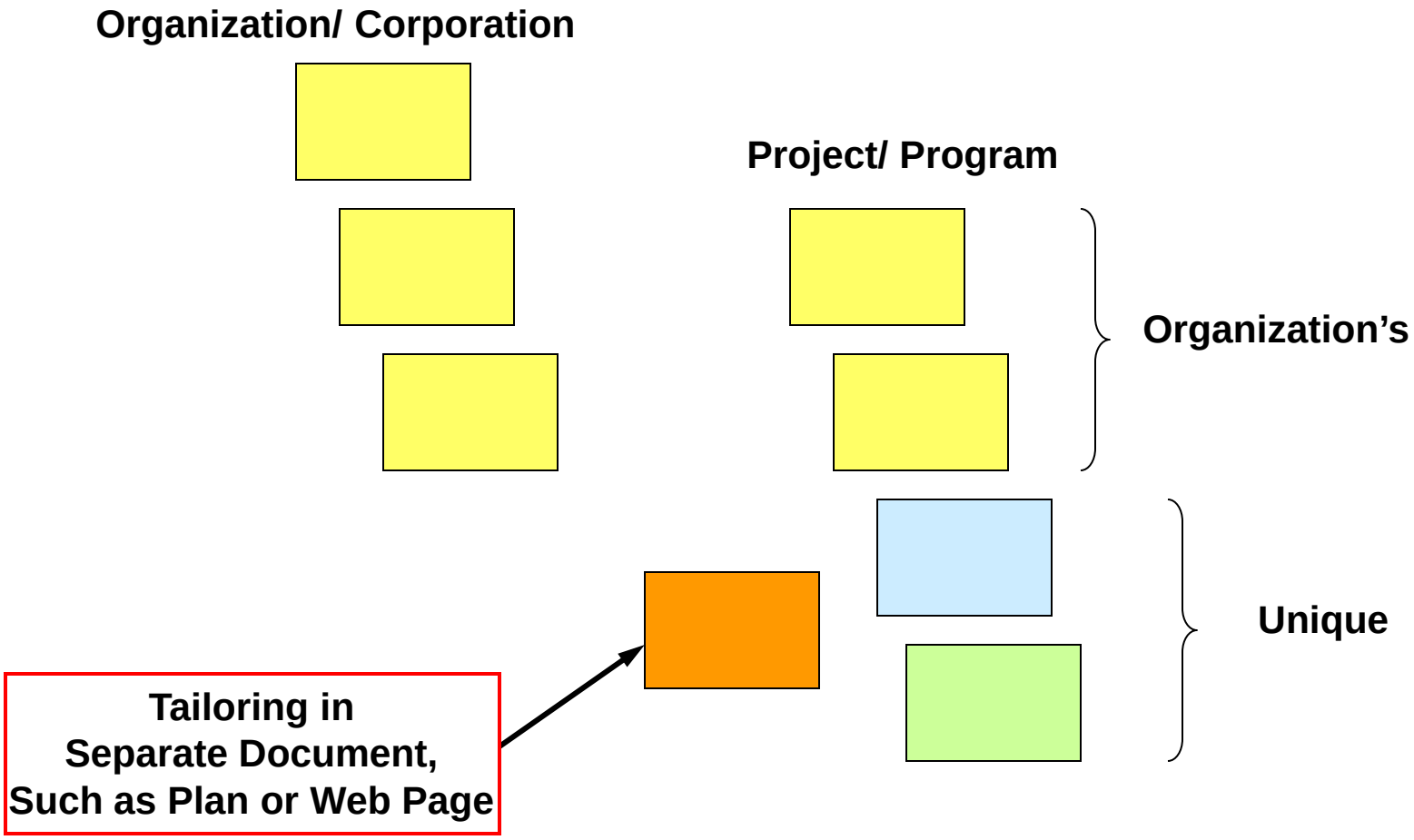
# Tailoring Documentation Differences

- **Typical Process Architecture – After Tailoring - #3**

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# Resolution Process

- **Two parts:**
  - **The project's tailoring guidelines**
  - **The corporation's and division's (the organization's) standard processes**
- **Authority to tailor flows down from the corporate management through tiers of its organization to a Process Group governing a project**
  - **Tailoring authority must meet diverse interests of the corporation**
  - **Must also meet the needs of the project for it to be CMMI "compliant" and maximize value to the project**

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# Resolution Process (continued)

- **Major consideration is how good and how disciplined the corporation's standard processes are to begin with.**
  - **If the corporation has good process discipline and many practitioners trained in sophisticated techniques, it is easier to provide clear rules for tailoring because many of the issues have already been solved**
  - **A corporation with rambling, confusing process and procedure documents that just grew over time will have difficulty fitting tailoring provisions into them**
    - **Adding tailoring words to confusing text will still look confusing and be hard to understand and follow**
    - **When you consider tailoring, it often highlights the need to overhaul process and procedure documents**
  - **Most corporations are probably somewhere in middle**

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# Special Factors in Resolution

- Individual executive personalities are real (e.g., she has a “won’t of iron” – she won’t give any flexibility)
- Standard process SMEs often have views (I would not have written that if I didn’t want everyone to do it exactly that way.)
- Cost is a major consideration, but not always evaluated in same way
  - CMMI is often viewed as expensive, so authority should consider cost containment
  - Authority to add or elaborate may result in unnecessary added costs
  - Frequent process improvement activity can be “churning”
  - Process changes can result in need for more training expenditures
  - Appraisal and audit costs, including artifact costs, can rise with more tailoring
  - May result in unnecessary process differences across project or among similar projects, resulting in added costs
  - More tailoring increases process documentation costs
  - Corporations ask: Which process expenditures produce the most value? CMMI is not the only choice.
  - Is a business case needed for justification?
  - Does authority to delete or change contribute to added risk? Is any added risk properly managed?
  - How does CMMI activity fit with non-CMMI activity?
  - What is relationship to computer tools and their cost?
  - Is project workforce mostly experienced or “beginners”?
  - Is customer involvement present?
  - Does culture favor detail or brevity?

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# How to proceed

- Need to identify the organization's set of standard processes and evaluate their suitability first
- If they are inadequate, we are talking about process changes and process improvements to the standard set before we ever get to tailoring for a project
- Need to put specific tailoring rules into organization's set of standard processes in order to enable them to be tailored in a predictable, disciplined way.
  - Top level for entire corporation can take a long time to coordinate, and can become too general
  - Limiting to one division or business unit may not have the right authority for higher level documents, but is easier to get approved
  - Choice of which standard process document to modify
  - Choice of where to document tailoring – relates back to Organization's standard processes
    - For users to find it
    - For information for other projects
    - For configuration control
    - Relationship to other documents that may be modified
    - May be separate issue of where to document approval
    - Relationship to process improvements
  - Need to get attention of higher management and get on their priority list

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# Result

- Tailored processes at project level fit into spectrum of higher level processes, same level processes, lower level processes and work instructions, standards, tool instructions, training materials, library or knowledge management assets, etc.
- I would like to be able to say that there is a perfect way to solve the Tailoring Dilemma, but there isn't.
- The best we can do is to indentify all of the applicable requirements and constraints and work through them in a rational and consistent way that meets the requirements and provides value.
- There will always be some people who will be unhappy.
- Don't be one of them!

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