

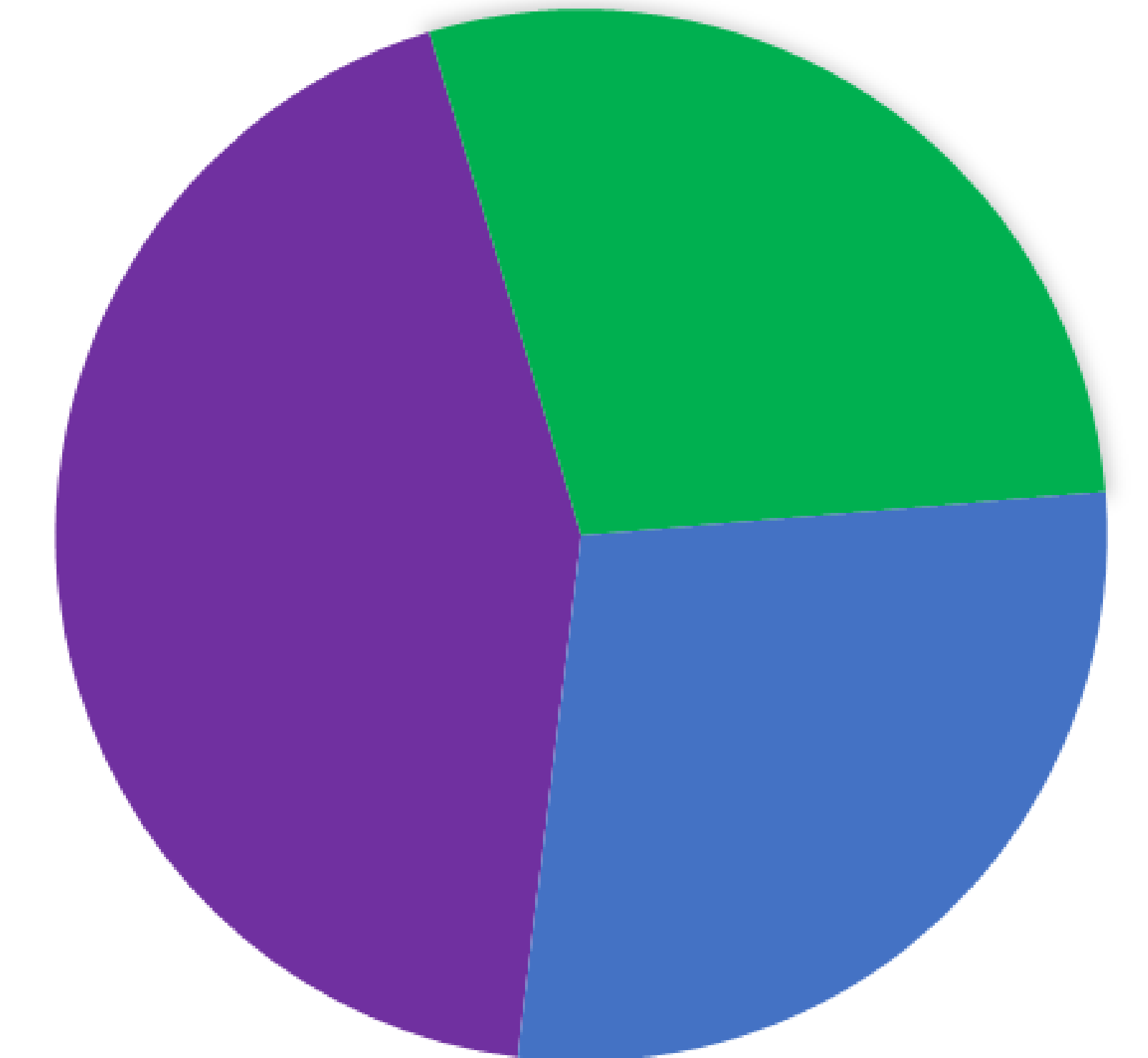
The Multicultural Interpretation of Graph Colors



INTRODUCTION

Graphs, though readable and honest, often use colors without audience consideration. Color meanings vary between users and situations, thus data may not be interpreted as intended. These choices can influence understanding and decision-making in multicultural organizations.

- Countries can share the same flag colors, but each flag means something different
- Road markings and traffic signs communicate shape and color before text and symbols
- LED notifications on electronics (shipped globally) have a single context independent of cultural meaning

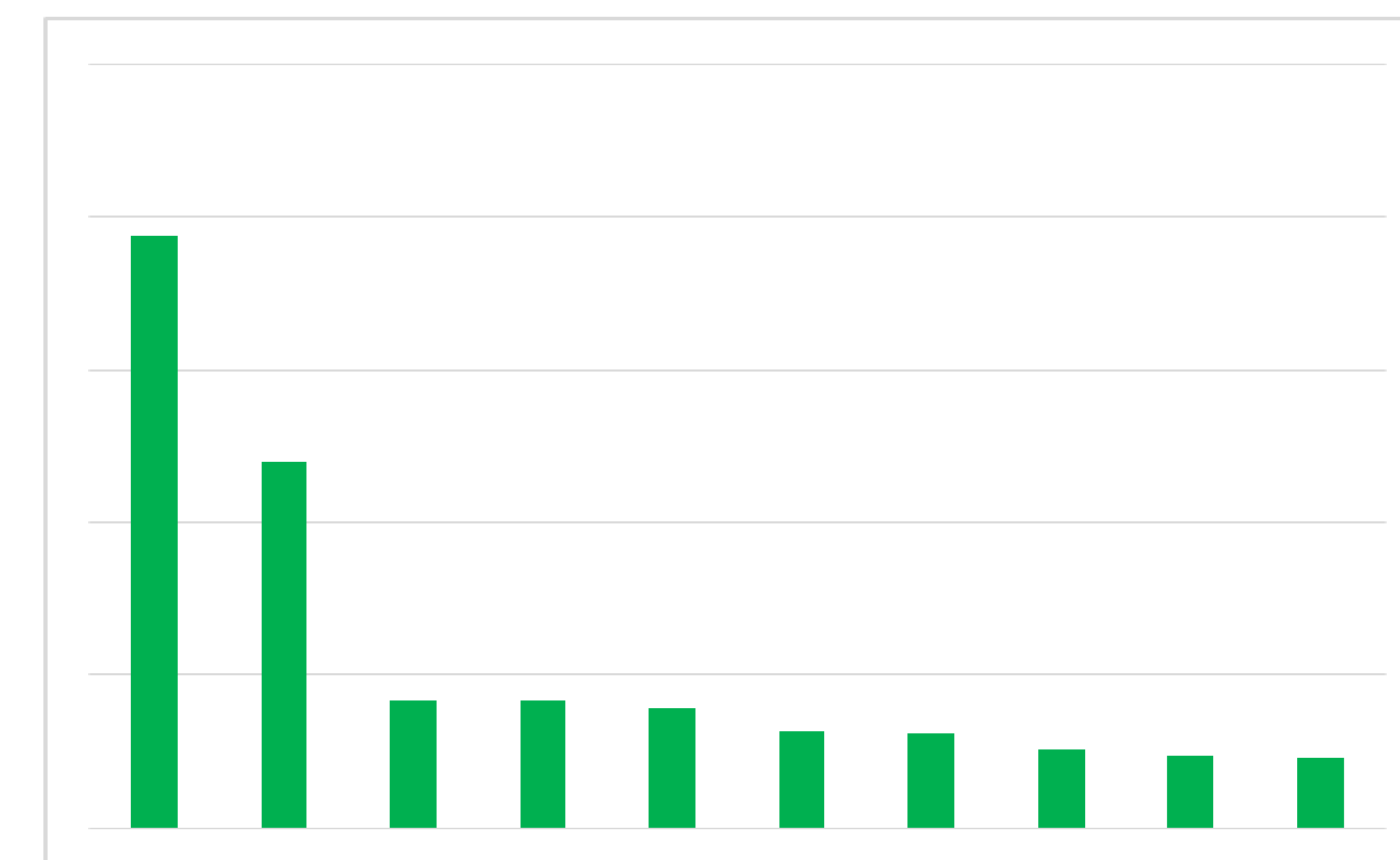


Note: Graph shows sponsor's organizational colors

PROBLEM

Information cannot always be localized. Highly diverse organizations (**IEEE, The United Nations, CERN, NATO, INTERPOL**) have audiences that receive data collectively, but are interpreted and acted on through individual cultural lenses. Their style guides rigidly detail format and spelling conventions. Color guidelines, however, are often absent.

“Green for process control engineers means “nominal or safe,” for financial managers it means “profitable,” and for healthcare workers it means “infected” [1].



Note: Green used to show profit

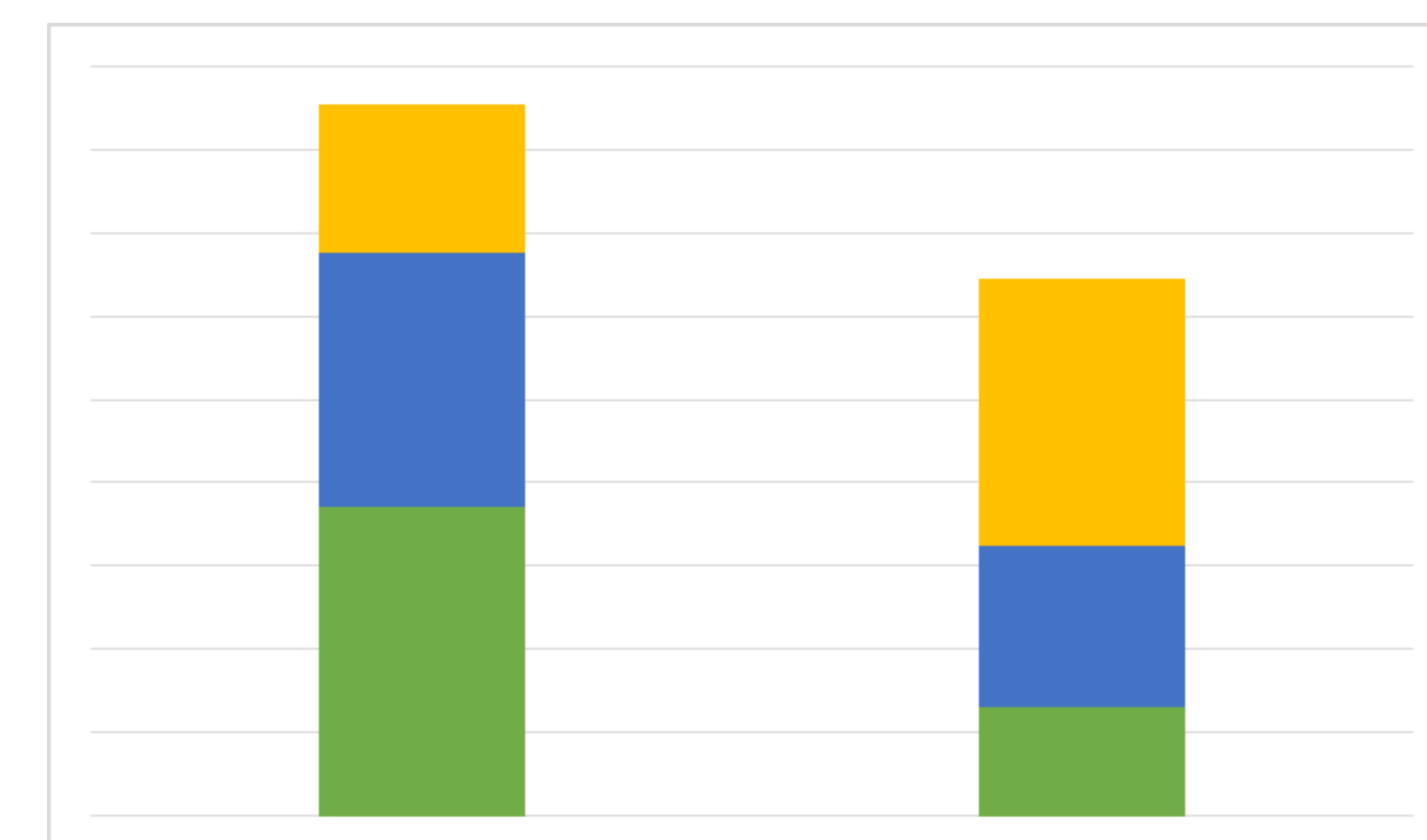
SOLUTION

New color meanings can be acquired which conflict with one's cultural associations, but context must be **learned** to be understood.

A single-sentence explanation of graphical color choices can resolve misinterpretation. This has several salient benefits:

- Aligns author intent with audience interpretation
- Creates a single, shared understanding of color meaning
- Forces designers to be more thoughtful about color choices
- Has applications beyond in-house documentation:
 - Travel guides (such as explaining important visual information)
 - Signage in international airports and stadiums (e.g., Olympics and World Cup)

“Knowledge of color distinction will help a visual designer reduce reaction time, decrease message distortion, and defer opposition within an audience” [2]. Explaining graphic color choices benefits both author and audience.



Note: Graph shows spreadsheet default colors

References:

- [1] Brockmann, R. J. 1991. The unbearable distraction of color. *IEEE Transactions on Professional Communication* 34 (3): 153-9.
- [2] Caricato, Josephine A. 2000. Visuals for speaking presentations: An analysis of the presenter's perspective of audience as a partner in visual design. *Technical Communication* 47 (4): 496-514.