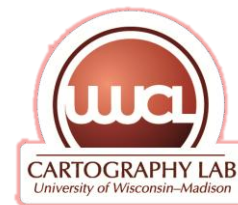Unit 5: Design Sprint 3 | 13.05.25 14:30–17:00+
Polishing Your Visual Story

Schedule at a Glance

Day 1 // Monday 12.05.25

- **Unit 1: Introductions & Inspiration Talks**

  - 10:00 to 10:15 // Arrival (and coffee!)
  - 10:15 to 10:30 // Introductions from Georg Gartner and Robert Roth
  - 10:30 to 10:45 // Inspiration Talk 1: The United Nations Sustainable Development Goals (Ayako Kagawa)
  - 10:45 to 11:00 // Inspiration Talk 2: Tips for Mapping the SDGs (Robert Roth)
  - 11:00 to 11:15 // Inspiration Talk 3: Making an Atlas in a Day (Alicia Cowart)

- 11:15 to 11:30 // Break

- **Unit 2: Team Formation**

  - 11:30 to 12:00 // Picking Your SDG (rank your top three SDG themes, narrow into small groups, facilitated by Robert Roth)
  - 12:00 to 13:00 // Brainstorming Your Story (breakouts with Alicia Cowart, Merve Keskin, N.T. Nawshin, Robert Roth, Zdenek Stachon, and available TUW staff)

- 13:00 to 14:00 // Lunch

- **Unit 3: Design Sprint 1, Obtaining Your Data, Researching Your Topic**

  - 14:00 to 15:30 // Team Work (organizers available for questions)

- 15:30 to 16:00 // Creative Break, the Marshmallow Challenge (facilitated by Robert Roth)

- **Unit 4: Design Sprint 2, Sketching & Organizing Your Visual Story**

  - 16:00 to 17:30 // Team Work (organizers available for questions) *The goal is to have cleaned, mappable data in a GIS by day's end*
  - 17:30+ // Continue Work As Needed (Optional)

Day 2 // Tuesday 13.05.25

- **Unit 5: Design Sprint 3, Polishing Your Visual Story**
  - 14:30 to 15:00 // Adobe Illustrator Demo
  - 15:00 to 17:00 // Team Work (organizers available for questions) *The goal is to be out of GIS and into Adobe Illustrator by day's end*
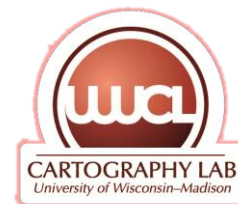 - 17:00+ // Continue Work As Needed (Optional)

Day 3 // Wednesday 14.05.25

- Initial Drafts Due in Google Slides by *16:00*

- **Unit 6: Team Presentations & Draft Feedback**

  - 16:00 to 18:00 // Presentations

- 18:00+ // Social (!) *Recommendations appreciated!*

Day 4 // Thursday 15.05.25

- Second Drafts Due to Rob by *16:00*

- PhD Student Show and Tell (N.T. Nawshin, Gareth Baldrica-Franklin) *Contact Rob if you are interested in giving a 5-10 minute lightning talk*

- 18:00+ // PhD Student Social (Alicia and Rob will crash!) *Recommendations appreciated!*

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1. Learn tips and tricks for designing for the grid in Adobe Illustrator (~15 minutes)

2. Review the prompts for the artistic statements and guidelines for presentations

3. Review cartographic design decisions that are difficult to change after moving to Adobe Illustrator with the organizers, including: projections, generalization, normalization, and classification

4. Discuss your visual style: form (e.g., line widths), color, type, & texture

Important: The goal is to be out of GIS and into Adobe Illustrator by day's end!

Important: Take a Day 2 progress screenshot; final draft screenshot should be added to Google Slides by **16:00 tomorrow** (Wednesday)
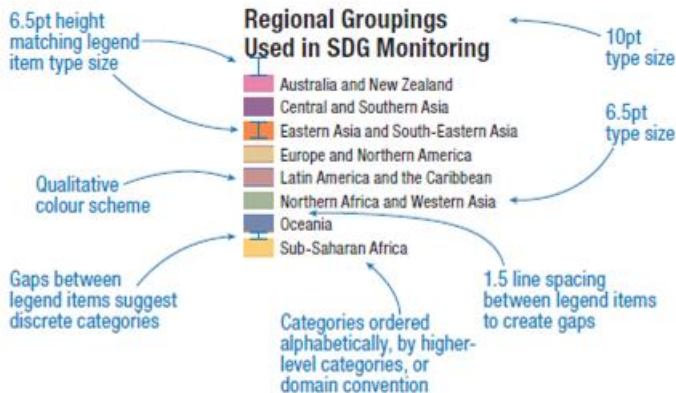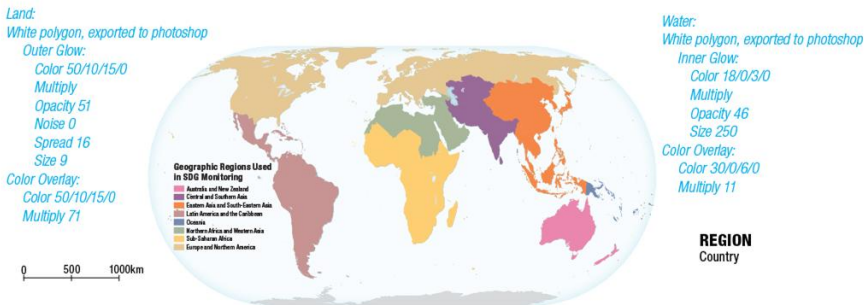
Maps
Rock!
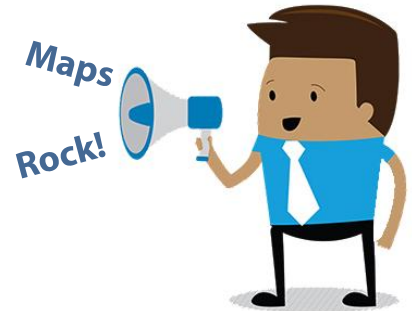
STROKES & CORNERS
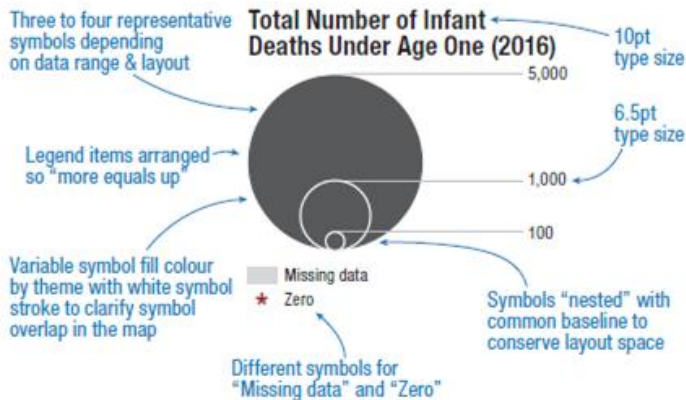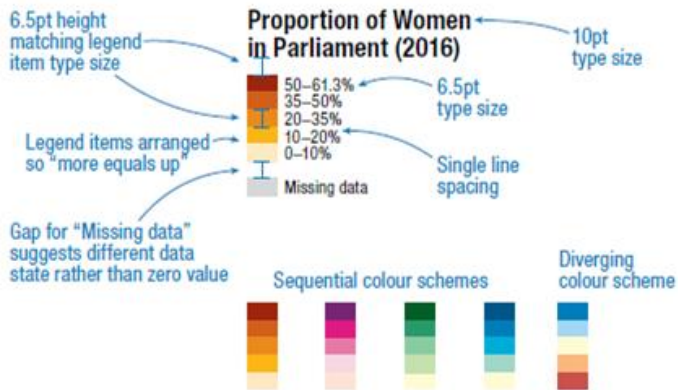
country boundary (30K, 0.4 stroke width)
figure arrowheads (100K, arrow 2, scale 80%, rounded cap)
figure rounded rectangles (3pt corner radius)
figure rounded rectangels outline (30K, 0.4 stroke width)

EXPORTS

Place .AI files rather than image exports into layout
Export a copy of maps/figures as .PDF on "high quality print" setting

Land:
White polygon, exported to photoshop
Outer Glow:
Color 50/10/15/0
Multiply
Opacity 51
Noise 0
Spread 16
Size 9
Color Overlay:
Color 50/10/15/0
Multiply 71

Water:
White polygon, exported to photoshop
Inner Glow:
Color 18/0/3/0
Multiply
Opacity 46
Size 250
Color Overlay:
Color 30/0/6/0
Multiply 11

Geographic Regions Used in SDG Monitoring
Australia and New Zealand
Central and Southern Asia
Eastern Asia and South-Eastern Asia
Latin America and the Caribbean
Oceania
Northern Africa and Western Asia
Sub-Saharan Africa
Europe and Northern America

0   500   1000km

REGION
Country

6.5pt height matching legend item type size

Proportion of Women in Parliament (2016)

10pt type size

50–61.3%
35–50%
20–35%
10–20%
0–10%

6.5pt type size

Legend items arranged so "more equals up"

Single line spacing

Missing data

Gap for "Missing data" suggests different data state rather than zero value

Sequential colour schemes

Diverging colour scheme

Regional Groupings Used in SDG Monitoring

6.5pt height matching legend item type size

10pt type size

6.5pt type size

Australia and New Zealand
Central and Southern Asia
Eastern Asia and South-Eastern Asia
Europe and Northern America
Latin America and the Caribbean
Northern Africa and Western Asia
Oceania
Sub-Saharan Africa

Qualitative colour scheme

Gaps between legend items suggest discrete categories

Categories ordered alphabetically, by higher-level categories, or domain convention

1.5 line spacing between legend items to create gaps

Three to four representative symbols depending on data range & layout

Total Number of Infant Deaths Under Age One (2016)

10pt type size

5,000

6.5pt type size

1,000

Legend items arranged so "more equals up"

100

Variable symbol fill colour by theme with white symbol stroke to clarify symbol overlap in the map

Missing data
★ Zero

Symbols "nested" with common baseline to conserve layout space

Different symbols for "Missing data" and "Zero"

Cartography often is described as both an art and a science. As an intergovernmental organization, the United Nations serves global *humanitarian* efforts, and its treatment of map design as an artistic process enables new ways to *humanize* the otherwise abstract statistical SDG indicator data.

As *visual art*, maps help us share our experiences of the world, promote empathy and compassion about uneven social and environmental conditions, and inform policy and politics for forging a sustainable future. As *visual culture*, maps reflect our interests and values, make us to confront our failures and prejudices, and reveal potential alternatives and opportunities.

The potential for artistic perspectives on cartography are numerous and ever expanding. One important way that artist elements enter every map design is through its *visual style*, or a cohesive set of design characteristics and qualities that reinforce rather than undermine the purpose of the map.

A visual style can be deconstructed into its elemental forms, colours, typefaces, and textures (**Figure 2.14-1**). *Form* describes the variable aspects of the geospatial linework, including its generalized detail (see **Section 2.7**) and line weights, cap and joint styles, and tapering. Colour and typography—de-
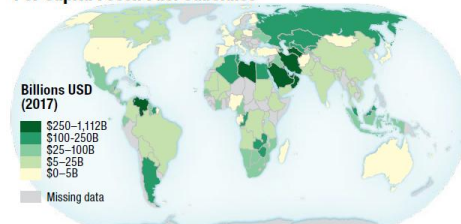

Figure 2.14-1: Visual styles in four web basemaps. **Left:** OpenStreetMap Mapnik uses detailed linework, complex colours and textures, and dense type, activating the audience and producing a sense of accuracy and trustworthiness in the basemap. **Left-centre:** Esri World Light Gray Canvas uses simplified linework and visual hierarchy along with muted colours, textures, and labels to deactivate the audience, making it a good basemap when additional data overlays should rise to figure (see **Section 4.6**). **Right-centre:** CARTO Dark Matter similarly uses simplified linework and sparse type and textures but with a darkened colour palette, setting an ominous, tense tone in the map. **Right:** Stamen Watercolor includes whimsical linework, bright colours with no type, and textures mimicking the spread of watercolours over paper, evoking a pleasant almost serene sense of beauty with the map.
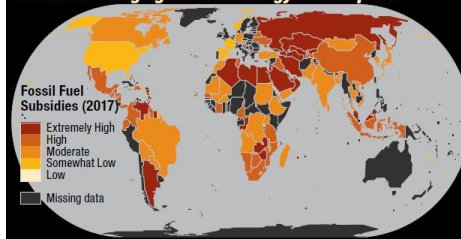
Figure 2.14-2: Visual styles and emotion. Indicator 12.c.1 (2017) on per capita fossil fuel subsidies in USD is mapped in two different visual styles. **Top:** The minimalist, authoritative style includes detailed linework and a soft colour palette. The map uses an arithmetic classification to emphasize low values in the left-skewed data distribution. Such a minimalist style likely evokes a pleasant, but deactivated emotional experience. **Bottom:** The alternative, creative style includes angular linework and bold colours against a black background, with the title framing the map purpose. Ordinal data are mapped with a quantile classification, placing more countries into the higher classes. Such a sensationalist style likely evokes an activated, unpleasant emotional experience, which may or may not be appropriate for the mapping context.

fined in **Section 2.10** and **Section 2.11** respectively—greatly influence the map's visual style. Both colour and typography evoke strong but different connotations cross-culturally. Texture, a visual variable (see **Section 2.9**), describes the additional pattern fills and overlays that add visual complexity and often suggest a physical materiality or historical pastiche.

The visual style of the map has a major impact on the audience's emotional experience: both setting the mood as a pleasant or unpleasant topic while also engaging or boring the reader. Understanding the relationship between style and emotion helps cartographers identify a visual style that matches the gravity of the mapped phenomena while avoiding blatant map propaganda. A minimalist, authoritative style often is applied when mapping the SDG indicators, such as many of the maps in this book (**Figure 2.14-2**, top), to assert neutrality and suggest data accuracy. However, no map design is perfect nor free from subjectivity (see **Section 2.3**), and alternative, creative visual styles may better promote awareness, generate dialogue, and stimulate action (**Figure 2.14-2**, bottom).

A visual style that works well in one mapping context may be illegible, misleading, or even harmful in others.