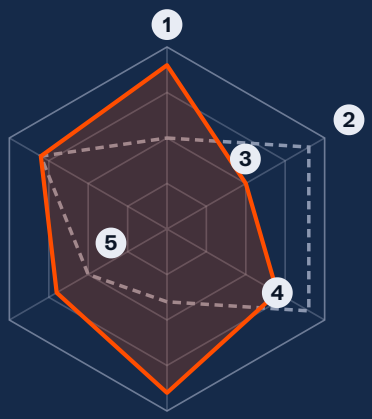
Chart by Chart, cheat sheet 2

# Radar charts

(jdegbau) ⇒ {}

A radar chart (spider chart) shows **a profile**: one to three items scored on five to eight measures that share one scale. Each measure is a spoke; each item's scores join into a shape.

## Anatomy




1. **Spoke (axis):** one per measure, all on the same scale, 0 at the center.
2. **Axis label:** names the measure. Keep it short.
3. **Gridlines:** rings at equal steps of the scale.
4. **Data point:** an item's score on one measure.
5. **Shape:** the points joined up, the item's profile. Main item in orange, comparison in dashed grey.

## How to read it

1. **Check the scale.** Is the center 0? What's the outer ring?
2. **Read spoke by spoke.** Compare the points on each measure.
3. **Find ties and gaps.** Touching shapes are equal; the widest gap is the clearest difference.
4. **Describe the profile.** Where does each shape stretch? Never judge by area.

## Design checklist

- [ ] Same scale on every spoke, 0 at the center
- [ ] Higher means better on every spoke
- [ ] 5 to 8 spokes, 1 to 3 items
- [ ] Related measures side by side, same order on every chart
- [ ] One strong color for the item that matters, grey for the rest
- [ ] Light, see-through fills
- [ ] Title states the takeaway; data table available

## Watch out: two built-in flaws

**Area exaggerates.** Area grows with the square of the scores: in the example, a 12.5% higher total covers 27% more area. **Axis order changes the shape.** Reordering the same scores changed one shape's area by 15%. Group related measures and keep one order.

## Do and don't

### ✓ Do

- Compare profiles and trade-offs
- Normalize to one scale first

### ✕ Don't

- Start the scale above 0
- Overlap solid fills

## Use instead

| If you need | Use |
|---|---|
| Exact values | **Grouped bars or dot plot** |
| 4+ items | **Small multiples or heatmap** |