

Critical Design Strategy (CDS)

Name design

Summarise essence

.....

Date

First impression
(circle 5 words)

clear

clever

complex

useless

useful

confusing

reliable

organised

average

fair

sensible

pointless

moderate

bad

vague

indifferent

indistinctive

spectacular

fulfilling

beautiful

| | | | Disagree | | Agree | | |
|--------------|----|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | | -2 | -1 | 0 | 1 | 2 |
| User | 1 | Is suitable for the user and task | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 2 | Is understandable for user and task to hand | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 3 | It doesn't require guesswork | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 4 | Is trustworthy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 5 | Would be useful | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Environment | 6 | It would fit in with other technologies | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 7 | Uses suitable technology | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 8 | Has appropriate interaction | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 9 | Its sizing is correct | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 10 | Gives a positive ambience | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Interface | 11 | Suitable user interface | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 12 | Ergonomic interface | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 13 | Facets are sized suitably | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 14 | Interface suitably spaced | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 15 | Suitable quantity of interface parts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Components | 16 | Has all necessary components | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 17 | Has all suitable output/view types | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 18 | Clear relationships between parts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 19 | Task can be easily performed | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 20 | Suitable organisation of components | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Design | 21 | Inspiring design | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 22 | Aesthetic and visually attractive | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 23 | Good composition and space utilisation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 24 | Suitable coverage of data/underpinning facets/concepts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 25 | Clear instructions, labels, legends to give context | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Visual Marks | 26 | Right choice of channels to communicate things clearly | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 27 | Communicates appropriate relationships/morphisms | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 28 | The types of marks used, communicate things well | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 29 | Components are shown at the right level of abstraction/detail | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | 30 | Nothing is hidden that shouldn't be hidden | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Reflection: first impression, individual categories

Sum values

Total

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Improvements:

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.....

.....

Total

Average

Poor design

Good design

Supplemental material. “Critical Design Strategy: a Method for Heuristically Evaluating Visualisation Designs - Short Sheet Version”. Jonathan C. Roberts, Hanan Alnjar, Aron E. Owen and Panagiotis D. Ritsos. IEEE TVCG, Jan 2026.