N	critical Design Strategy (CDS) ame design ummarise essence			First impression (circle 5 words)		useless	confusing reliable organised average	sensible pointless moderate bad	spect fulfilli	inctive acular ng		
		-2	-1	0	1 1	voras) 2	useful	fair	vague	beaut	IIUI	
User	 1 Is suitable for the user and task 2 Is understandable for user and task to hand 3 It doesn't require guesswork 4 Is trustworthy 5 Would be useful 	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	Incompr Require Distrust	ble>Suitabl rehensible> s guessworl ful>Trustful >Useful	·Understan k···•Clear as		ns	
Environment	6 It would fit in with other technologies 7 Uses suitable technology 8 Has appropriate interaction 9 Its sizing is correct 10 Gives a positive ambience	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	Unsuital Unsuital Unsuital	setting···+Rig ble technolo ble interaction ble size···+Su be/ambience	gy⊶Right on⊶Approp uitable phys	oriate inte sical size	eraction	
Interface	 11 Suitable user interface 12 Ergonomic interface 13 Facets are sized suitably 14 Interface suitably spaced 15 Suitable quantity of interface parts 	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	Uncomf Poorly p Poor fac	ble GUI Su ortable Ergoroportioned cet spacing ble facet qua	gonomic ···+Suitable ·+Relevant	spacing		ity
Components	 16 Has all necessary components 17 Has all suitable output/view types 18 Clear relationships between parts 19 Task can be easily performed 20 Suitable organisation of components 	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	Unsuitat Unclear Task unt	components ble types> S correspond fulfilled> Tas mponent lay	Suitable vie ences⊶Cle sk easily pe	w types ear view erformed	relations	hip
Design	 21 Inspiring design 22 Aesthetic and visually attractive 23 Good composition and space utilisation 24 Suitable coverage of data/underpinning facets/concepts 25 Clear instructions, labels, legends to give context 	0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	Unattrac Poor lay Unsuitat	ing•Inspirio ctive•Visua out•Good ole coverage els/legends	lly attractive compositio e+Suitable	n ` coverag	e	
Visual Marks	26 Right choice of channels to communicate things clearly 27 Communicates appropriate relationships/morphisms 28 The types of marks used, communicate things well 29 Components are shown at the right level of abstraction/detail 30 Nothing is hidden that shouldn't be hidden Sum values	0	00000	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	Inapprop Inapprop Poor sca	oice of chan oriate mappi oriate mark t ale/zoom ttingClear	ings⊶Appr types⊶Suit Good scale	opriate nadonalizate	napping	3
Re	eflection: first impression, individual categories	Tota										
		Improvements:									• • • • • •	
		· •										
A	Average	-10 	-5 -0.16	0	5 0.16	_	1	+ + -	16 1.33 1	5 50 .5 1.66	1.83	6 0

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