Grafično oblikovanje

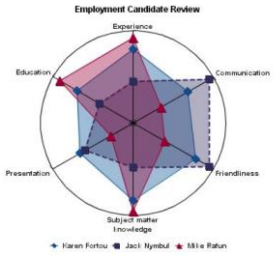
vizualizacija podatkov
dobra praksa

KORAKI VIZUALIZACIJE PODATKOV

koraki vizualizacije podatkov

1. Determine your message and identify the data necessary to comunicate it
2. Determine if a table, graph, or a combination of both is needed to communicate your message
3. Determine the best means to encode the values
4. Determine where to display each variable
5. Determine the best desing for the remaining objects
6. Determine if particular data should be featured above the rest, and if so, how

TABELA ALI GRAF?

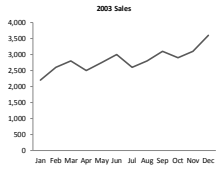


Employment Candidate Review

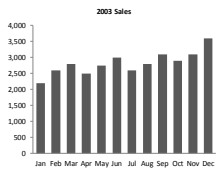
	Candidates		
Rating Areas	Karen Fortou	Mike Rafun	Jack Nymbul
Experience	4.00	4.50	2.50
Communication	3.50	2.00	5.00
Friendliness	4.00	2.00	4.50
Subject matter knowledge	4.00	5.00	2.50
Presentation	3.00	1.50	2.75
Education	3.50	4.50	2.00
Average Rating	3.67	3.25	3.21

RAZMERJA MED PODATKI

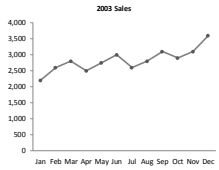
časovni potek



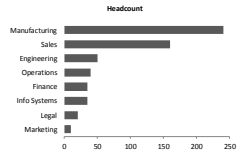
časovni potek



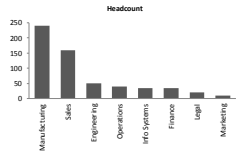
časovni potek



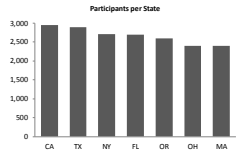
razvrščanje



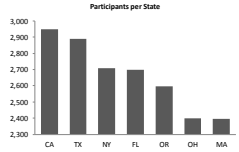
razvrščanje



razvrščanje



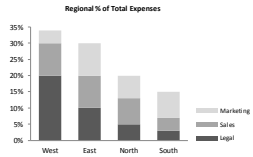
razvrščanje



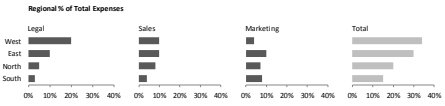
razvrščanje

delež celote

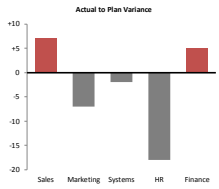
delež celote



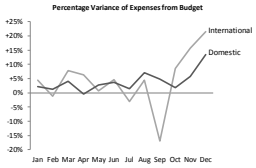
delež celote



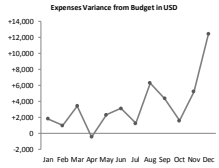
odstopanje



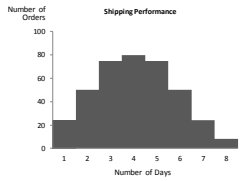
odstopanje



odstopanje

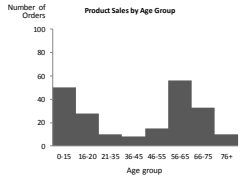


porazdelitev



porazdelitev

porazdelitev



porazdelitev

stebelni diagram

30 48 62 25 43 52
53 29 48 57 34 36
26 19 22 37 49 58
55 27 28 44 46 42

1. Razvrščanje po velikosti

19 22 25 26 27 29 30 34 36 37 42
43 44 46 48 49 52 53 55 57 58 62

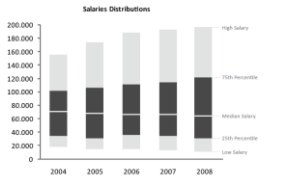
2. Razdelitev v skupne

19
22 25 26 27 29
30 34 36 37
42 43 44 46 48 49
52 53 55 57 58
62

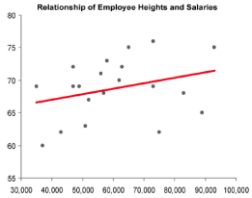
2. Izpis v obliki stebelnega diagrama

1 | 9
2 | 2 5 6 7 9
3 | 0 4 6 7
4 | 2 3 4 6 8 9
5 | 2 3 5 7 8
6 | 2

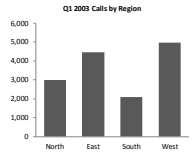
porazdelitev



povezanost



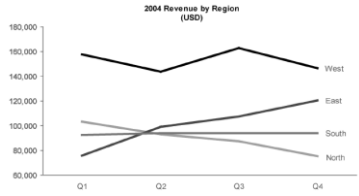
nominalna primerjava



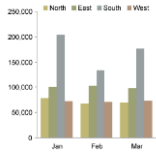
KAM S SPREMENLJIVKO?

SPREMNI ELEMENTI?

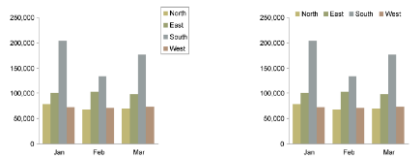
legenda



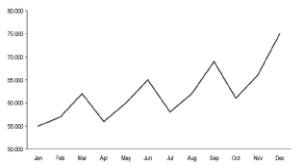
legenda



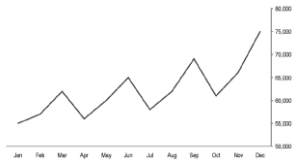
legenda



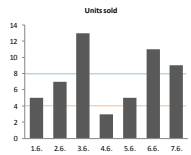
osi



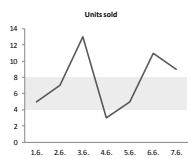
osi



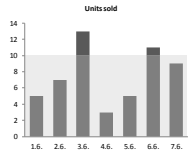
označbe



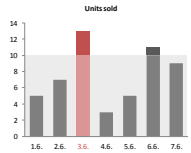
označbe



označbe



označbe



Edward Tufte in

VIZUALNE SMETI

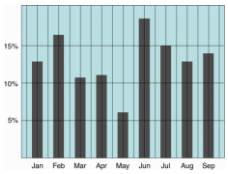
"The interior decoration of graphics generates a lot of ink which does not tell the viewer anything new. The purpose of the decoration varies - to make the graphic appear more scientific, to enliven the display, to give the designer an opportunity to exercise artistic skill. Regardless of the cause, it is all non-data-ink or redundant data-ink, and it is often chartjunk."

$$\textit{data-ink ratio} = \frac{\textit{data-ink}}{\textit{total ink used to print the graphic}}$$

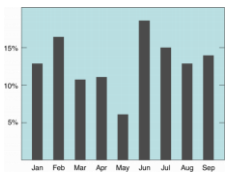
= *proportion of a graphic's ink devoted to the non-redundant display of data-information*

= *1.0 – proportion of a graphic that can be erased without loss of data-information.*

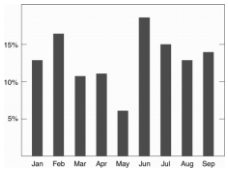
data-ink ratio



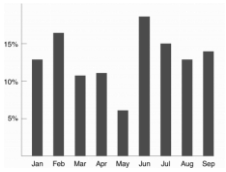
data-ink ratio



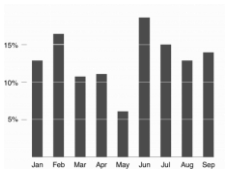
data-ink ratio



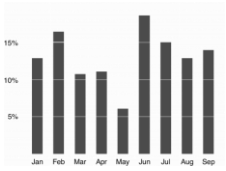
data-ink ratio



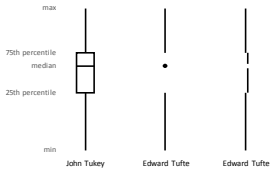
data-ink ratio

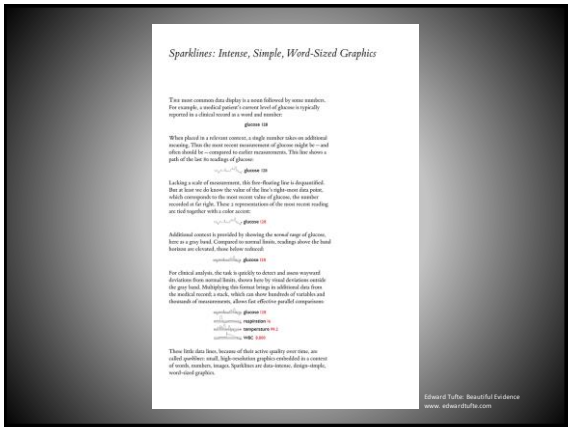


data-ink ratio



data-ink ratio



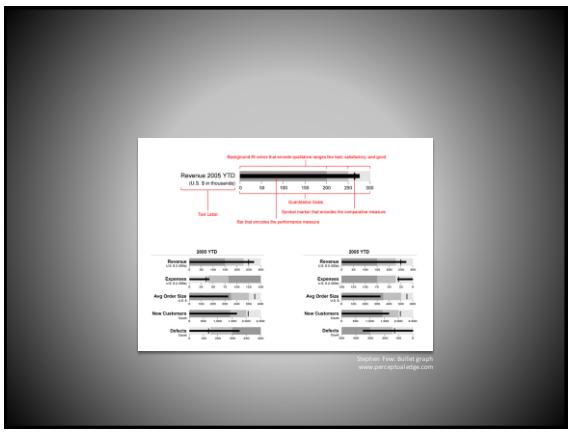


"A dashboard is a visual display of the most important information needed to achieve one or more objectives which fits entirely on a single computer screen so it can be monitored at a glance"

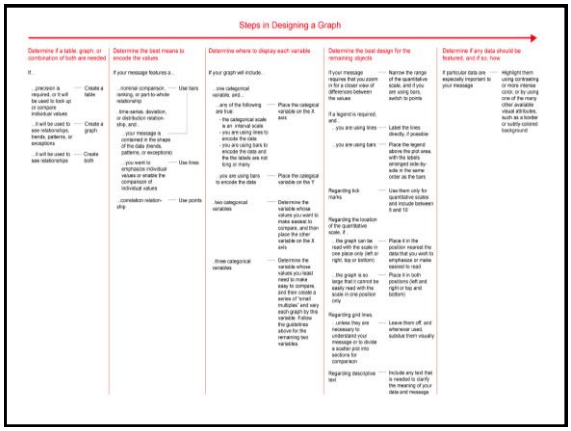
Stephen Few in

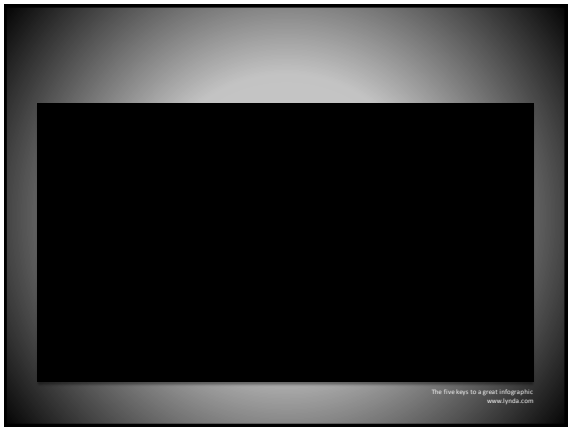
NADZORNE PLOŠČE

pregledne? plošče



IT Dashboard for D. Smith (CIO)
Major System Availability
Key Non-System Metrics
Major Project Milestones
Hardware % of Capacity
Monthly Network Traffic
Top 5 Projects in the Queue
Critical Events
Response Time


Steps in Designing a Graph
Determine if a table, graph, or combination of both are needed
Determine the best means to encode the values
Determine where to display each variable
Determine the best design for the remaining objects
Determine if any data should be featured, and if so, how


The five keys to a great infographic
www.lynda.com

dodatna literatura

BLOGI

http://www.visualcomplexity.com/vc/

http://flowingdata.com/

http://your.flowingdata.com/

http://datavisualization.ch/

http://dataviz.tumblr.com/

http://infosthetics.com/

http://dd.dynamicdiagrams.com/category/visual-explanation/

http://www.smashingmagazine.com/

dodatna literatura

DO PRIHODNJIČ

Few, *Effectively Communicating Numbers - Selecting the Best Means and Manner of Display* **goo.gl/ajq134**

Few, *Bullet Graph Design Specification* **goo.gl/e6OVgm**

Tufte, *Sparklines: theory and practice* **goo.gl/2pBCRM**

Stone, *Choosing Colors for Data Visualization* **goo.gl/M2f85t**

King, *How do you read a stem and leaf plot* **goo.gl/Gt17qX**

Tufte, *Envisioning information*

Few, *Now you see it*, **ch 7-12**

Few, *Information dashboard design*

Tufte, *The visual display of quantitative information*

Ware, *Information visualization: Perception for design*

Tufte, *Visual explanations: Images and quantities, evidence and narrative*