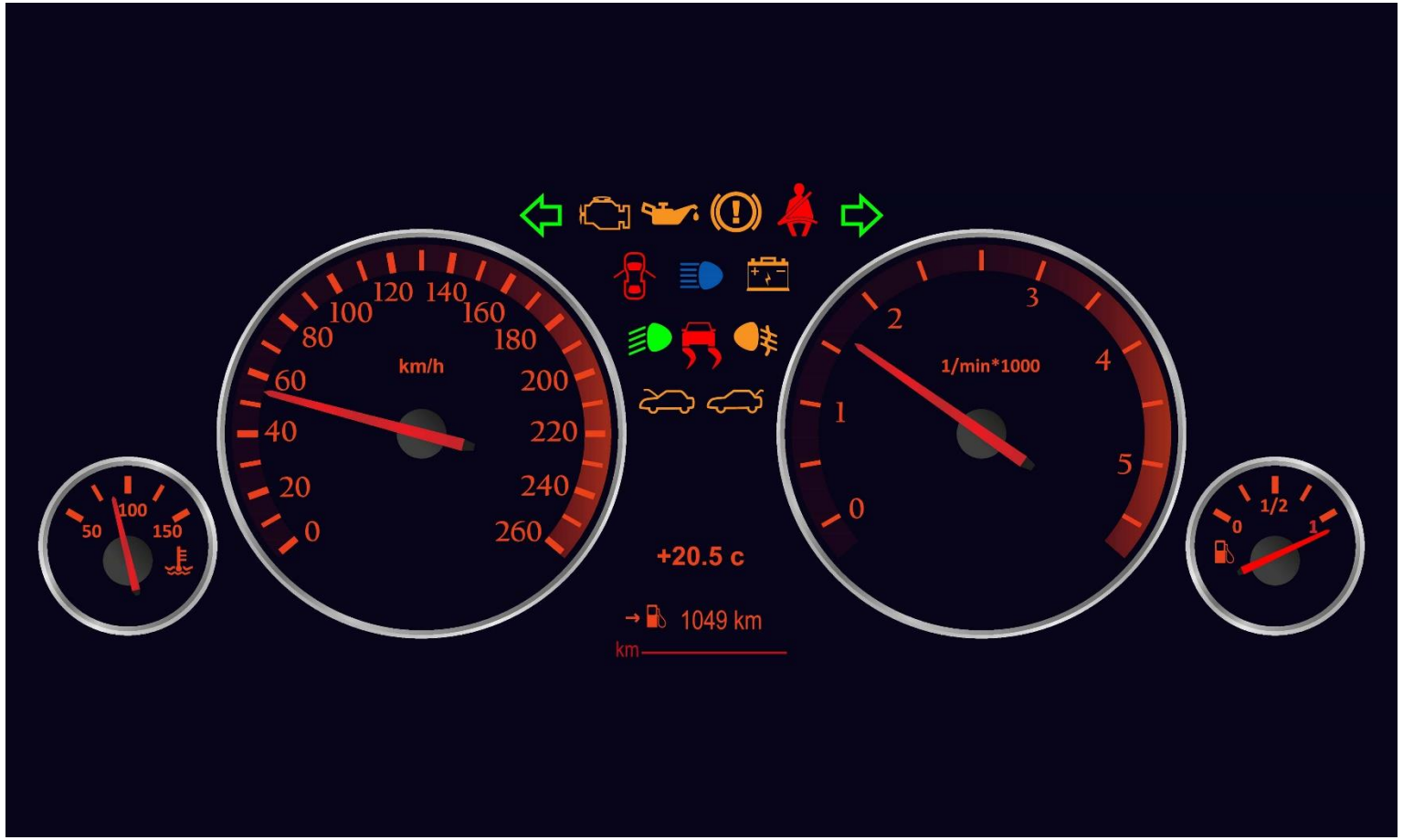
Dashboards

Dashboard

- A dashboard can be defined as

“a data visualization tool that displays the current status of metrics and key performance indicators (KPIs) simplifying complex data sets to provide users with at a glance awareness of current performance”

Dashboards are a collection of widgets that give you an overview of the reports and metrics you care about most.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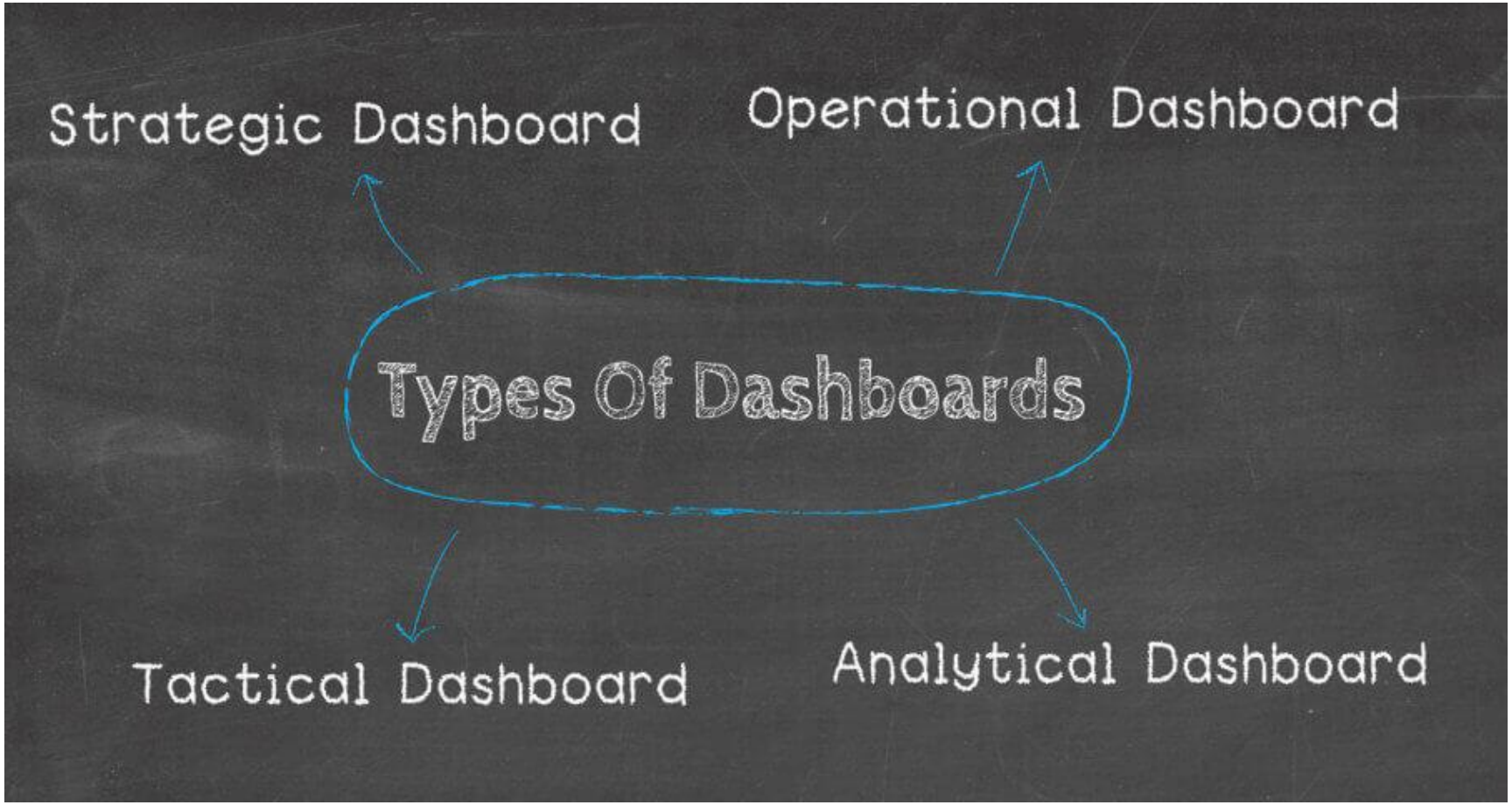
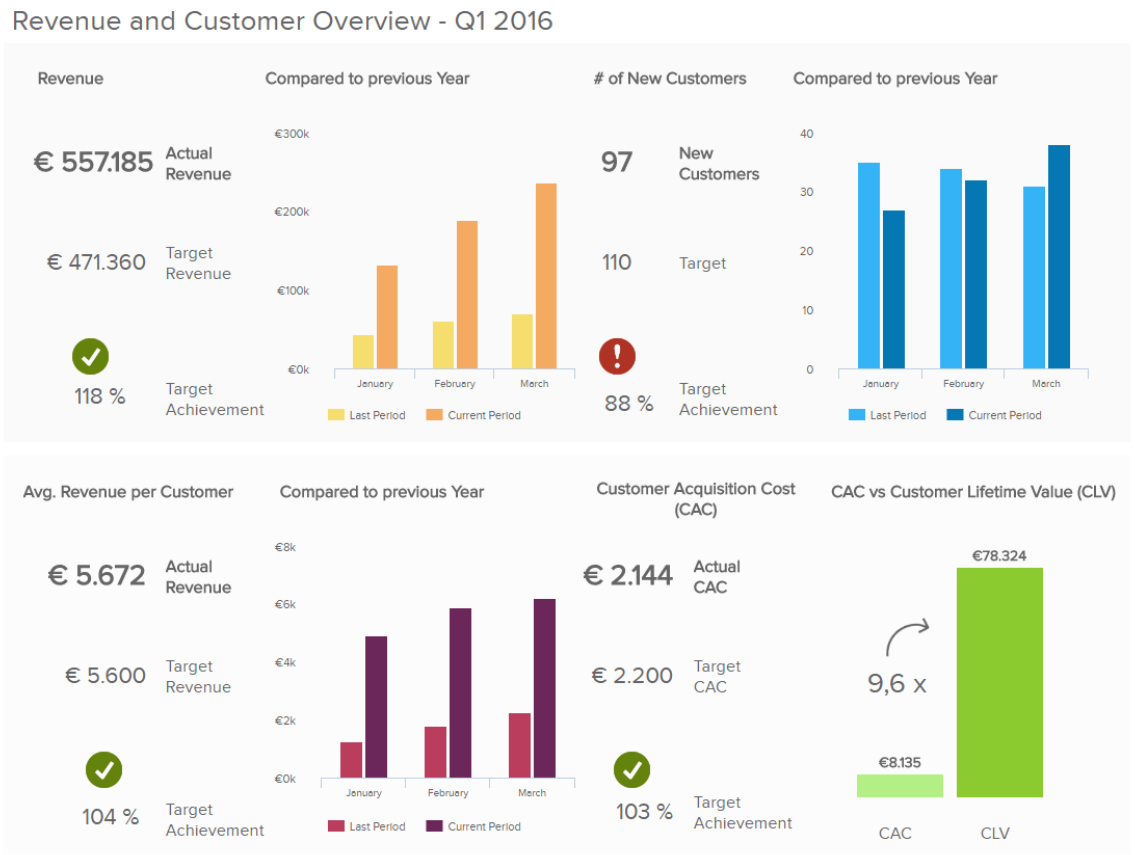
Types Of Dashboard



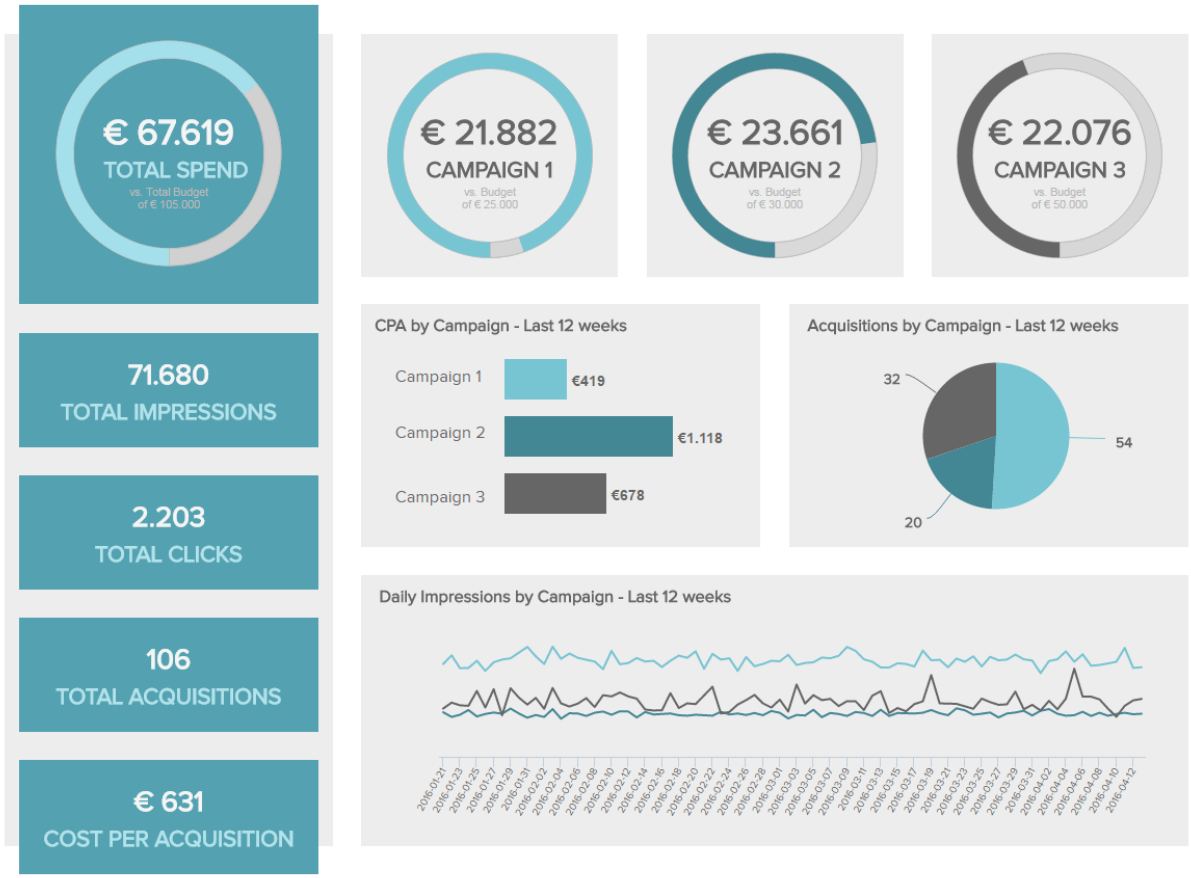
Types Of Dashboard

- **Strategic** - focused on long-term strategies and high-level metrics
- **Operational** - shows shorter time frames and operational processes.
- **Analytical** - contains vast amounts of data created by analysts.
- **Tactical** - used by mid-management to track performance.

Strategic Dashboard



Operational Dashboard



Customer Service Team Dashboard

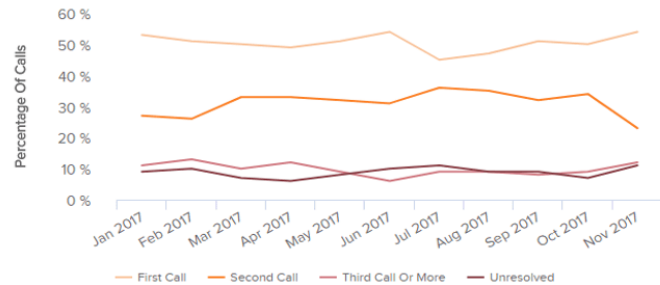
RESOLUTIONS

First Call Resolution

61%

Unresolved Calls

9%



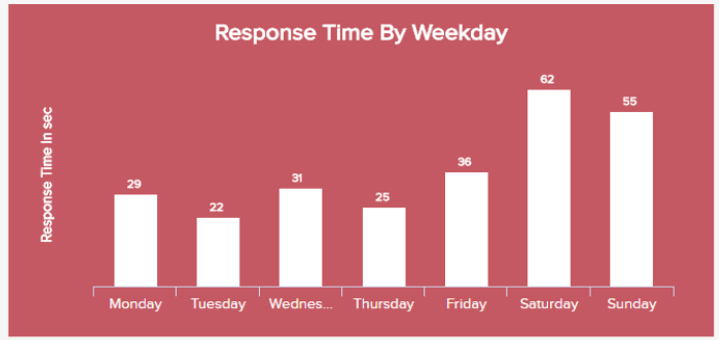
RESPONSE TIME

Avg Response Time

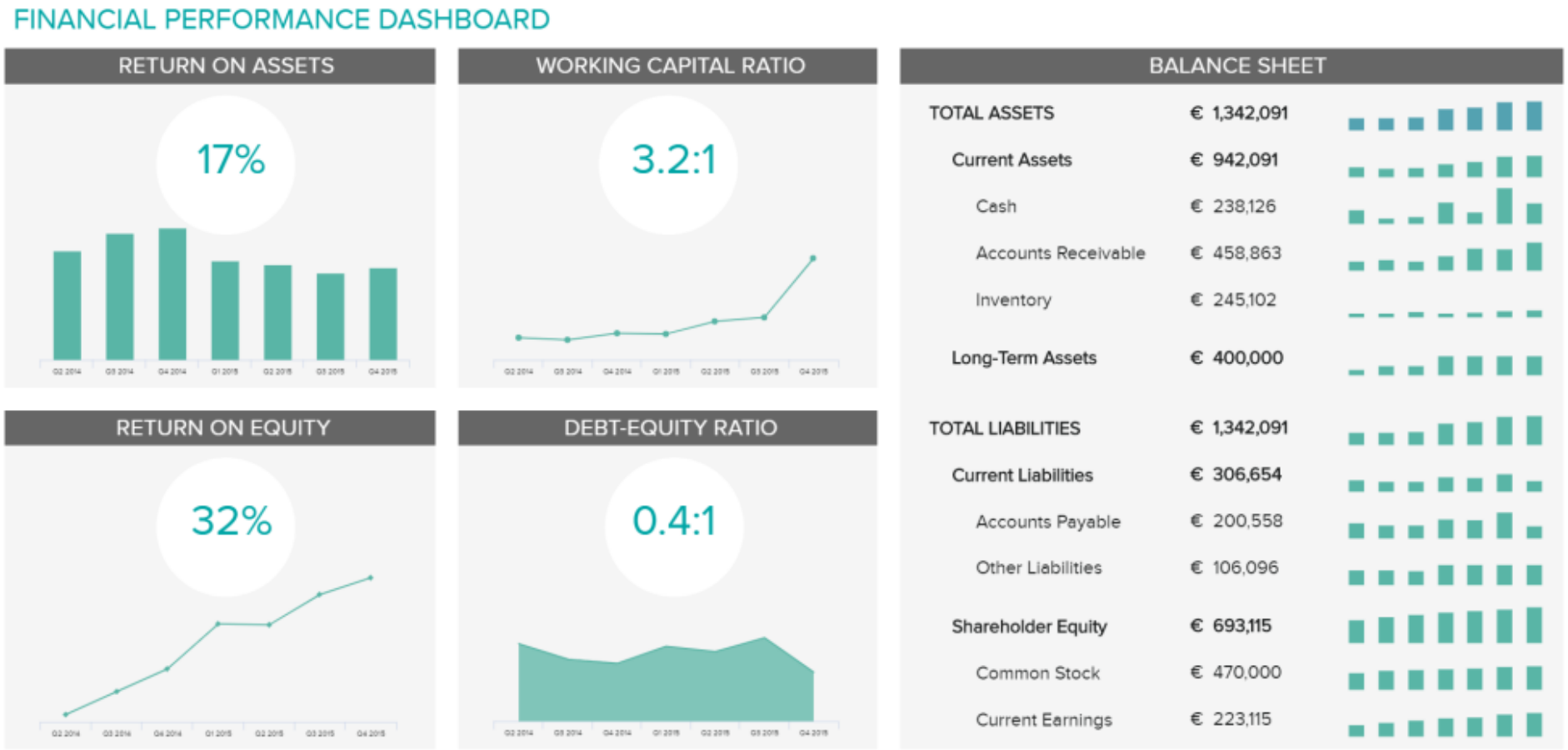
37 sec

Best Day To Call

Tuesday



Analytical Dashboard



Tactical Dashboard

A good BI dashboard design

- **Makes the complex simple:** we have lots of information, lots of data that changes all the time and different analytical needs and questions. We want to take all this complexity and make it simple.
- **Tells a clear story:** we want to be able to connect data to its context in the business and to answer the viewer's questions. This is where the visual layout of a dashboard plays a crucial role.
- **Expresses the meaning of the data:** the chosen data visualizations need to correctly represent the data, and the information you want to extract from it.
- **Reveals details as needed:** we want each viewer to have access to the data they need – no less but also no more. Some users might need to be able to see a more granular view of the data – others could suffice with an overview.

Poor dashboard design

- Too many widgets (about 30 of them), visualization and indicators creating visual clutter
- Basic questions such as “what is the total amount of sales” take much more than 5 seconds to answer
- No organizing principle behind the visual layout – widgets seem to be strewn randomly
- Tables in the bottom add very little in the way of insights

Good Dashboard design

- 1. The 5 Second Rule

Your dashboard should provide the relevant information in about 5 seconds.

- five-second rule – this is the amount of time you or the relevant stakeholder should need to find the information you're looking for upon examining the dashboard.

- Of course, ad-hoc investigation will obviously take longer; but the most important metrics, the ones that are most frequently needed for the dashboard user during her workday, should immediately 'pop' from the screen.

2. Logical Layout: The Inverted Pyramid

- Display the most significant insights on the top part of the dashboard, trends in the middle, and granular details in the bottom.

- 3. Minimalism: Less is More

Each dashboard should contain no more than 5-9 visualizations.

4. Choosing the right data visualization

Select the appropriate type of data visualization according to its purpose.

Visualization should serve a specific purpose and convey specific facts in a more effective way than the basic tabular format.

Dashboard for Healthcare

- encompass a wide variety of organizations and use cases — from hospitals to medical equipment manufacturers, and emergency rooms to intensive care units.

  dashboard metrics tracked by healthcare organizations can be fairly similar to the ones monitored in other industries such as finance or marketing

. business intelligence in hospitals presents a unique set of potential insights that can help physicians save lives by providing more effective and resourceful care to patients

Health care data sources

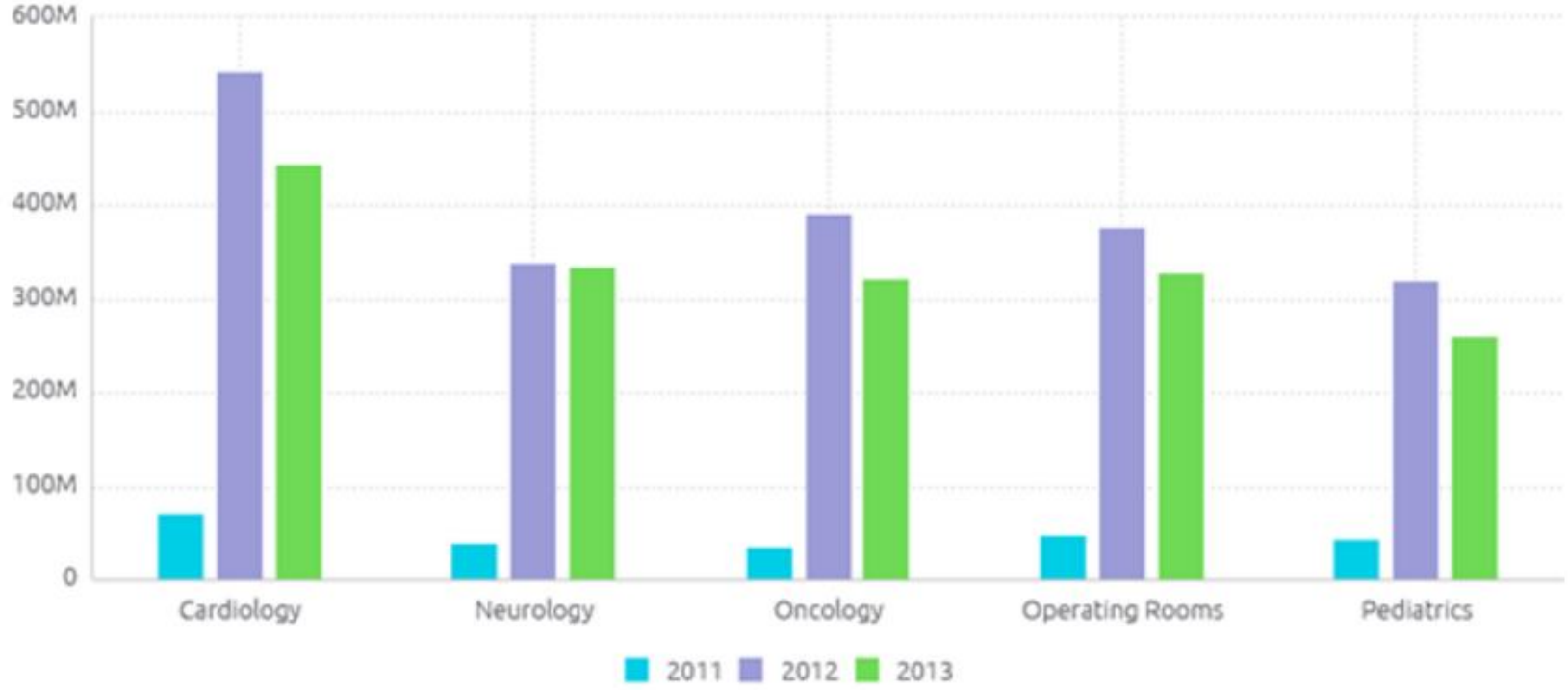
- Electronic medical records
- Electronic health records
- Specific department data
- Administrative data
- Financial data

Example healthcare metrics (KPI)

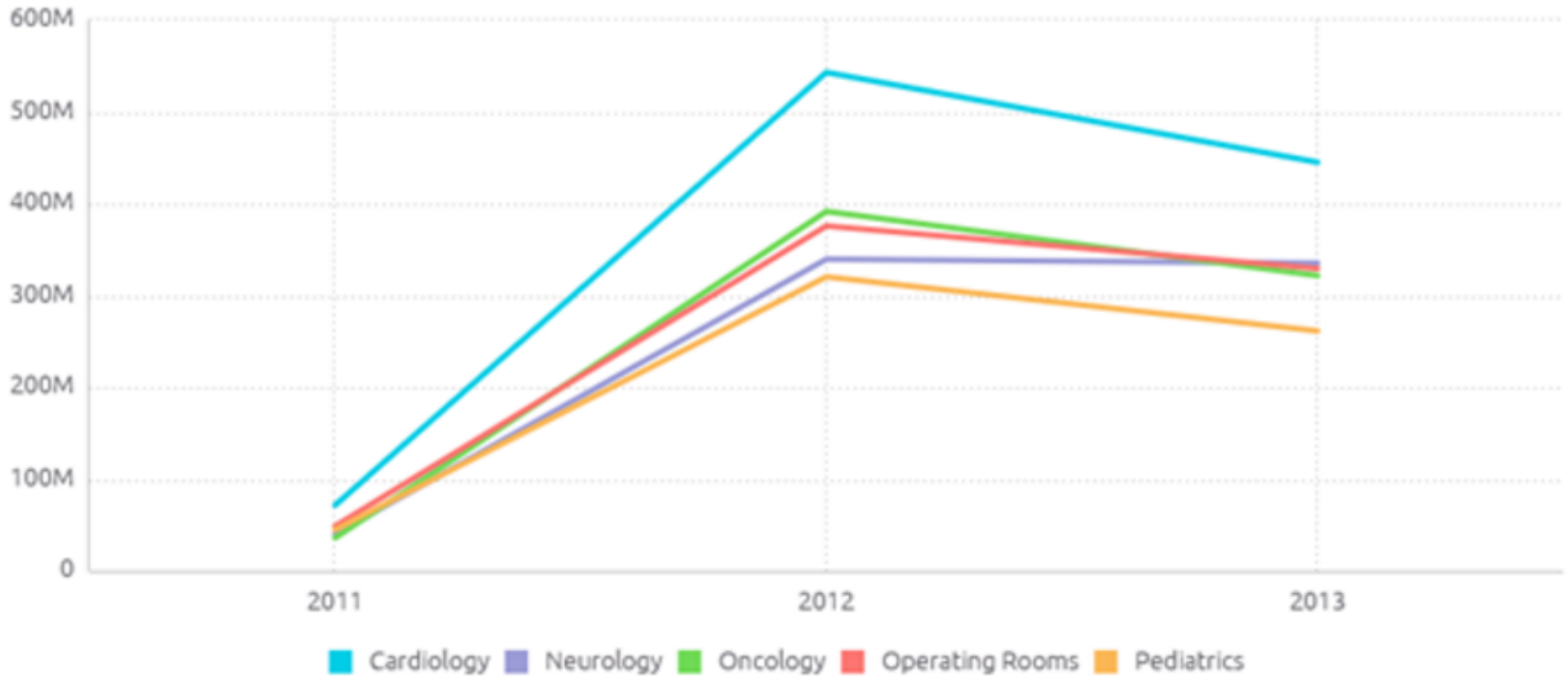
- Patient satisfaction
- Physician allocation
- Emergency room waittimes
- Number of occupied beds

Visualize the metrics – to provide more insights

- Comparison of Cost of addmission in different departments



Visualize trends and outliers



Hospital resource utilization – Patient admision and ER stay

Leading diagnoses by number of patients, cost and stay

TOP 10 DIAGNOSIS

DIAGNOSIS	# PATIENTS	AVG COST	AVG DAYS ADMITTED
Chronic Headache	173	$795,728	6.78
Chemotheraphy	174	$790,289	6.62
EKG	183	$786,703	6.03
Diabetes	191	$786,282	5.67
Epilepsy	177	$785,052	5.99
Bypass	169	$777,872	5.85
Hypoglycemia	177	$777,663	5.85
Cardiac Arrest	178	$777,426	6.24
Radiotheraphy	196	$776,702	6.15
Ear infenction	175	$755,058	5.63

Dashboard

AVERAGE ADMISSION COST

$789K

ANNUAL CHANGE 1.6%

TOTAL COST

$1.7B

ANNUAL CHANGE -14.1%

AVERAGE DAYS ADMITTED

8.42

ANNUAL CHANGE 97.4%

TOTAL PATIENTS ADMITTED

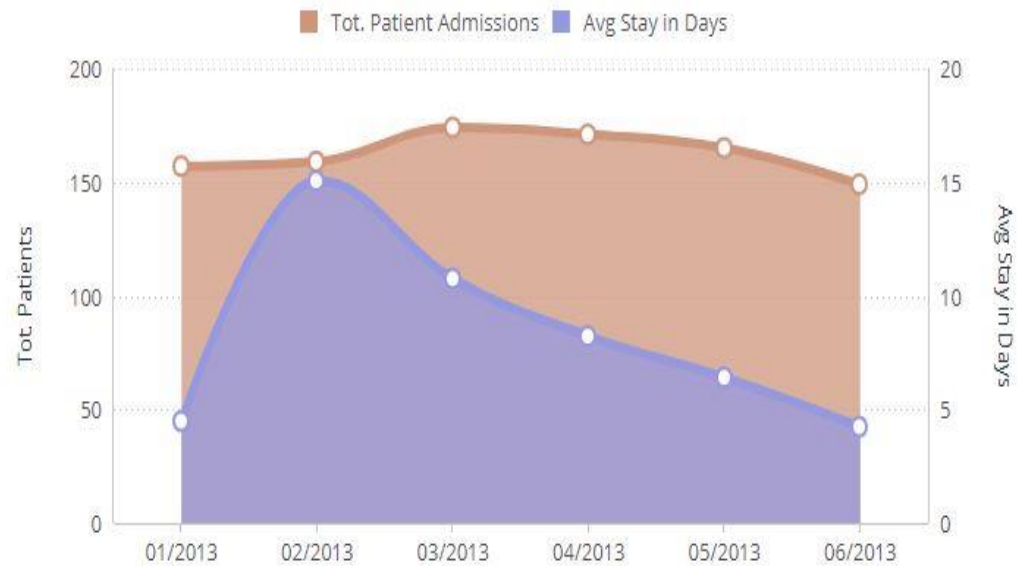
199

ANNUAL CHANGE -15.5%

TOP 10 DIAGNOSIS

DIAGNOSIS	# PATIENTS	AVG COST	AVG DAYS ADMITTED
Bypass	116	$781,957	8.
Cardiac Arrest	120	$796,833	8.
Chemotheraphy	119	$804,966	9.
Chronic Headache	122	$780,387	10.
Diabetes	154	$788,317	7.
Ear infenction	122	$764,097	6.
EKG	131	$790,577	8.
Epilepsy	110	$829,782	8
Hypoglycemia	125	$803,405	7.
Radiotheraphy	168	$768,751	8.
Grand Total	199	$788,621	8.

TOTAL PATIENT ADMISSIONS & LENGTH OF STAY (DAYS)



TOTAL ADMISSIONS BY DIVISION