



DATA TARGET

COMPING_

Platinum
Business
Partner



Pametno planiranje

(ili – je li vaše planiranje pametno kao vaša već mašina?)

Sanja Terziev, 12.5.2022.

Data Target

Tvrtka Data Target nastala je 2021. godine preuzimanjem većinskog udjela tvrtke Megatrend poslovna rješenja od strane Compinga.

U svom poslovnom portfelju ima podatkovni centar i infrastrukturni odjel te odjel poslovne analitike kojeg čini 20-ak vrhunskih stručnjaka raspoređenih u dvije vertikale:

→ **POSLOVNA**

→ **TEHNOLOŠKA**



DATA TARGET

comping_

Poslovna analitika

- Skladištenje podataka
- Poslovna inteligencija
- Napredna analitika



Tehnološka domena

- Podatkovni centar
- Infrastrukturna rješenja

DATA CENTAR

Kolokacija
Dedicirani hosting
Disaster recovery hosting
Virtualni data centar

USLUGE

Veeam cloud connect backup i disaster recovery
Backup as a Service – BaaS
Disaster Recovery as a Service – DRaaS
Mobile device management

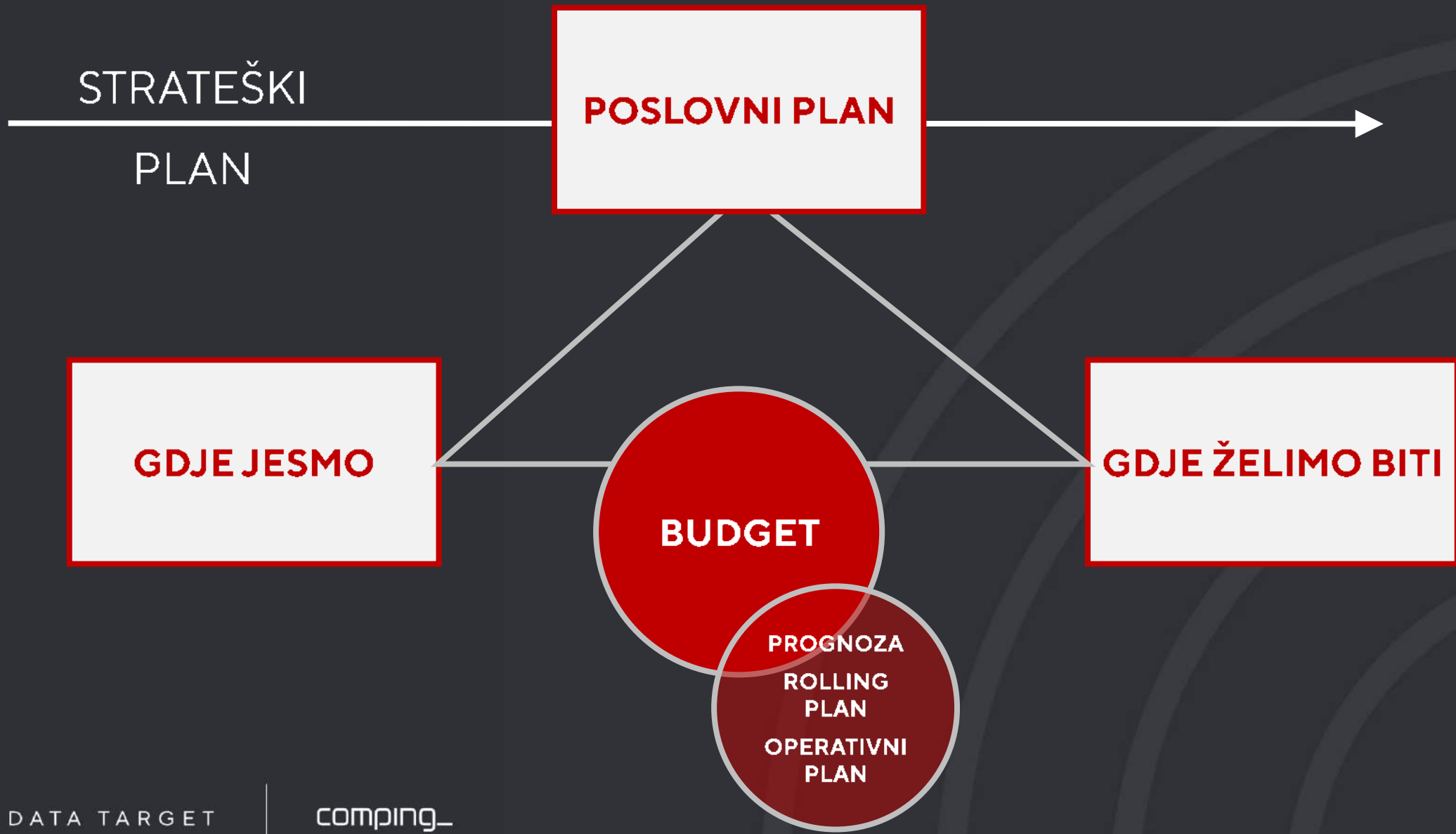
INFRASTRUKTURNA RJEŠENJA

Usluga systemske podrške
Virtualizacija
Zaštita podataka



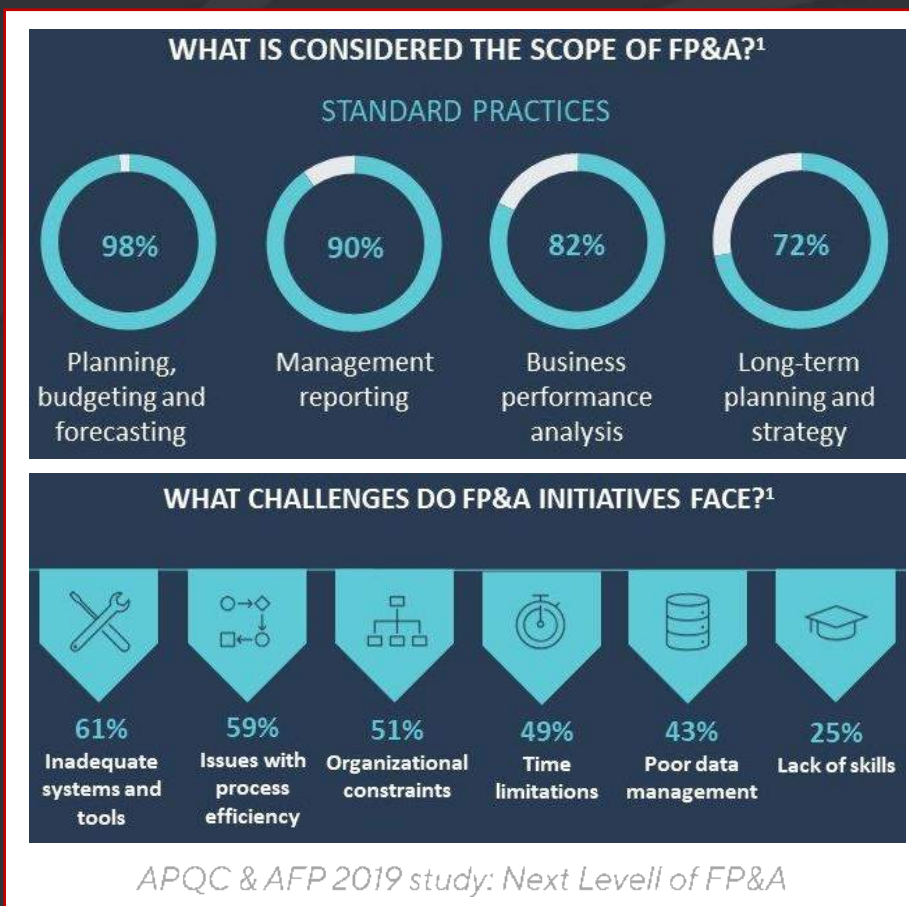
„A goal without a plan is just
a wish“

Antoine de Saint-Exupéry



Problemi

- nedostatak povezanosti sa strategijom
- izrada traje predugo
- preskupo je
- brojke su nejasne i nepouzidane



Novi/stari pristupi (+ *lessons learned*)

- Tradicionalno
- *Beyond Budgeting, Advanced Budgeting, Better Budgeting*
- *Zero Based, Activity Based*

- *Drivers, Rolling Forecast, Reforecasting*



„A budget is a mathematical confirmation of your suspicion“

A. A. Latimer

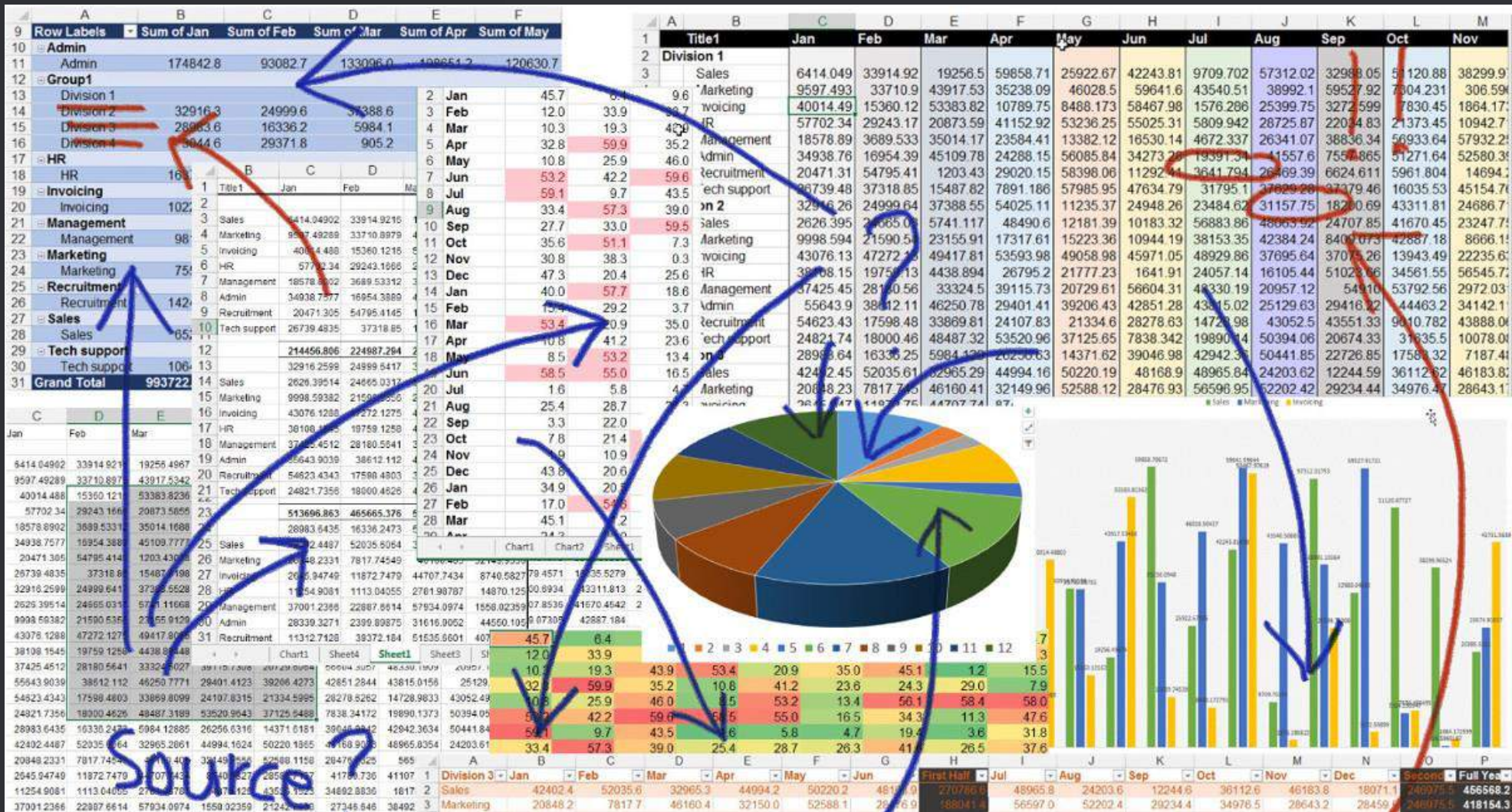
Business Intelligence
Algorithm
Natural Language Processing
Self Service
Cloud
Dashboard
OLAP
Predictions
Data Science
Metric
Processing
Data Lake
Solution
Big Data
KPI
Cube
In Memory
Visualization
SaaS
Machine Learning
Integration
Narrative Analysis
Hierarchies
Internet of Things





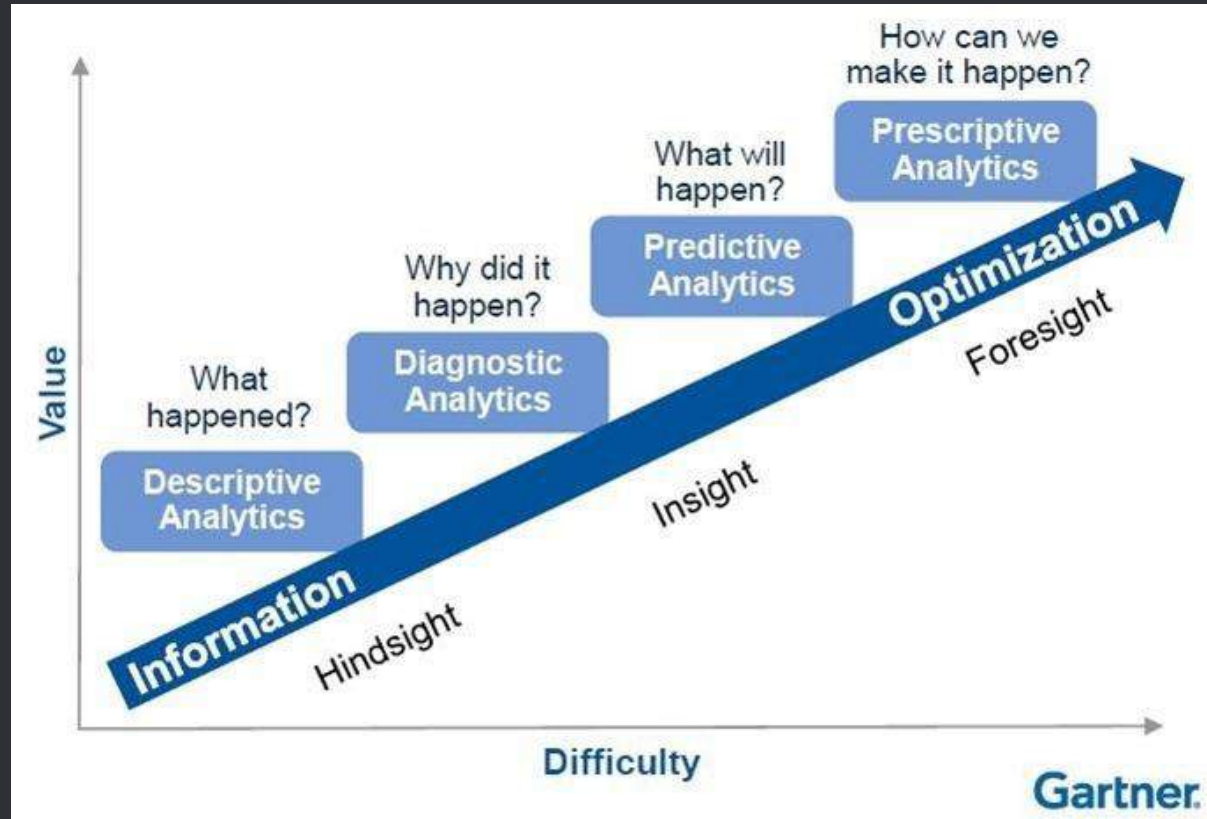
DATA TARGET

comping_

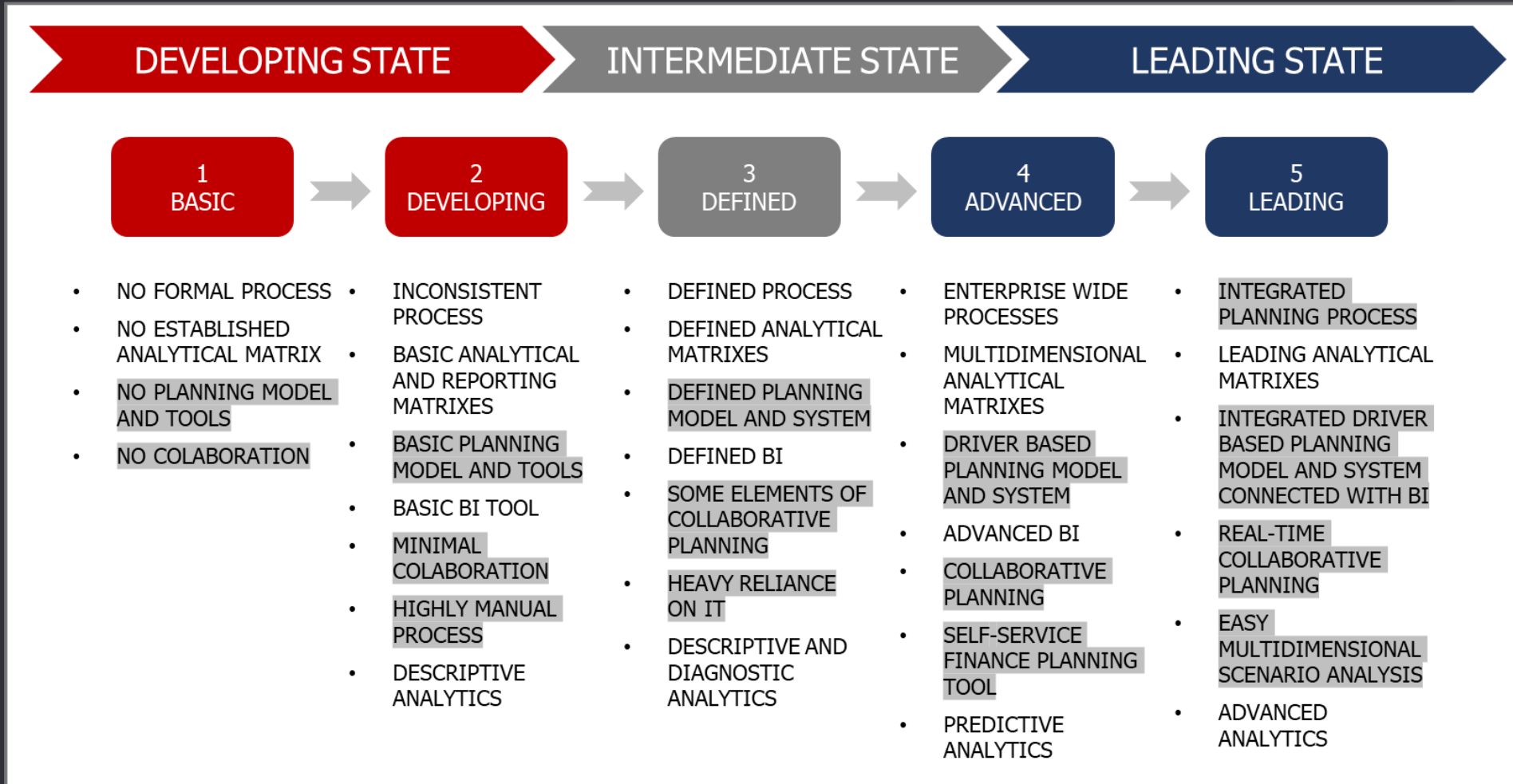


Source

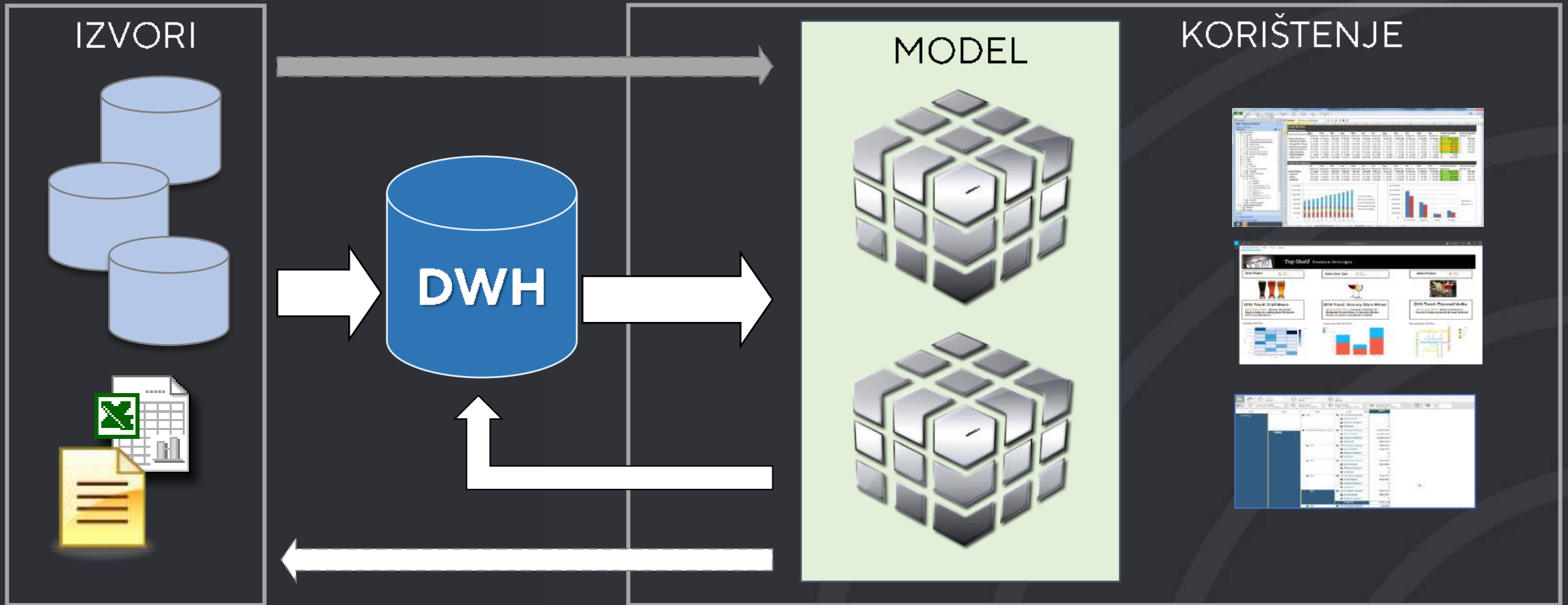
Gartner Analytics Maturity Model



FP&A Analytics Maturity Model

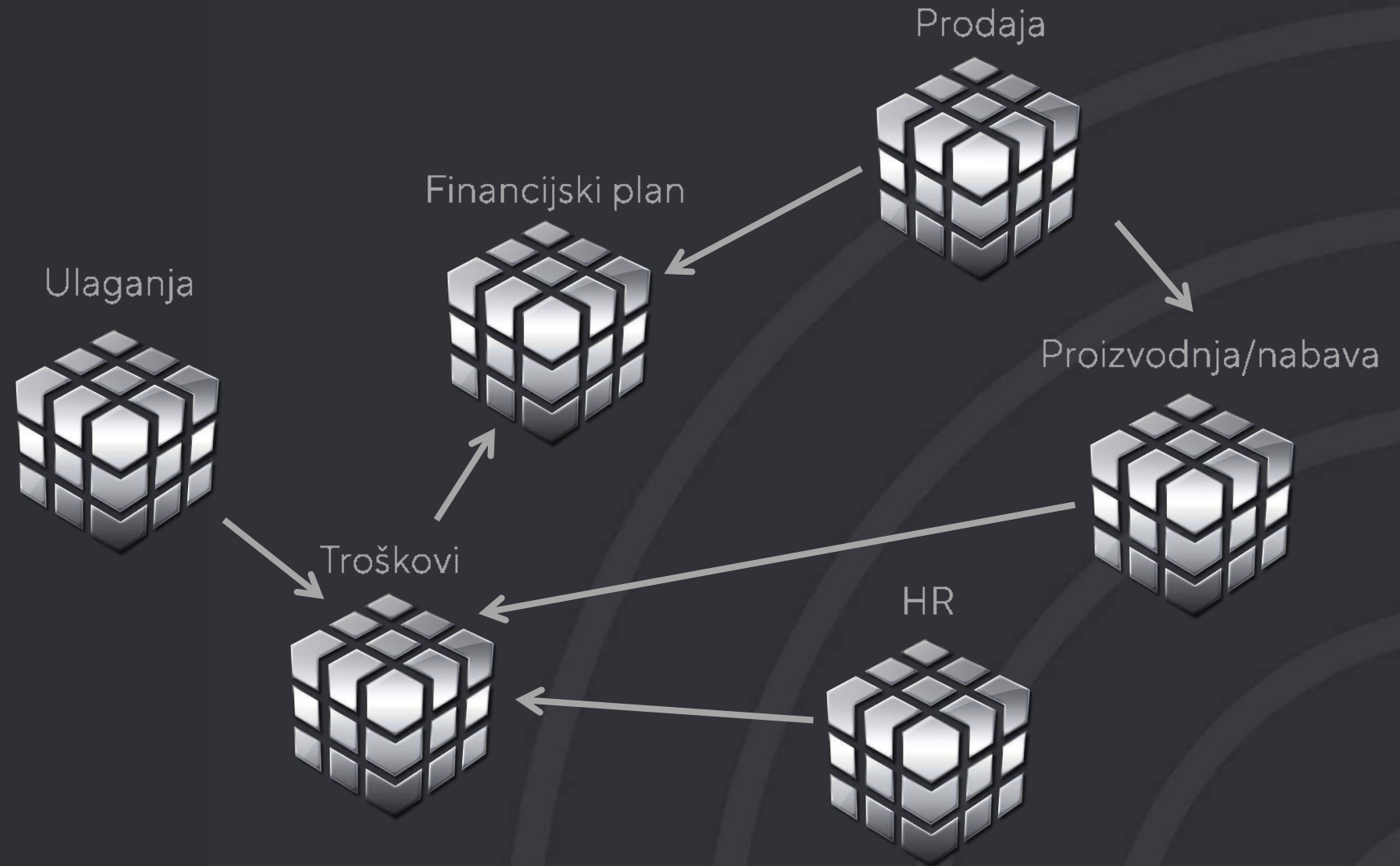


Integrirano planiranje



Sustav za planiranje

- Model
- Proces
- Alat



Odabir alata

- Potreba
- Mogućnost modeliranja
- Uklapanje u IT (digitalnu) strategiju
- Korisničko sučelje i ostale mogućnosti (unos, praćenje procesa, obrade ...)



„If the plan doesn't work,
change the plan, not the
goal“

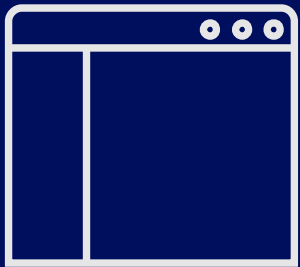
Tyrion Lannister, Game of Thrones

IBM Planning Analytics with Watson



Plan for anything, be ready for everything

Brže planiranje



Napredno modeliranje



Izvještavanje i dashboarding



Različiti klijenti



Analiza



DATA TARGET

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Svojstva

- povezanost
- prilagodljive forme za unos
- složene kalkulacije
- top-down i bottom-up

Employee Details Employee Summary **Department Summary** Employee Assumptions Income Statement

Organization: Massachusetts Year: 2019 Version: Budget

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
FTE	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0
Monthly Salary & Bonus	45,501	46,427	46,852	46,852	46,852	46,852	46,852	46,852	37,384	37,384	37,384	37,384
6000 Salary	44,176	45,075	45,487	45,487	45,487	45,487	45,487	45,487	36,295	36,295	36,295	36,295
6005 Bonus	1,325	1,352	1,365	1,365	1,365	1,365	1,365	1,365	1,089	1,089	1,089	1,089
6010 Benefits	5,668	5,757	5,799	5,799	5,799	5,799	5,799	5,799	4,629	4,629	4,629	4,629
Medical Exp	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,000	1,000	1,000	1,000
Other Benefits Exp	4,418	4,507	4,549	4,549	4,549	4,549	4,549	4,549	3,629	3,629	3,629	3,629
6015 Employer Taxes	5,195	5,301	5,349	5,349	5,349	5,349	5,349	5,349	4,268	4,005	3,169	3,034
FICA Exp	4,550	4,643	4,685	4,685	4,685	4,685	4,685	4,685	3,738	3,475	2,639	2,504
Medicare Exp	645	658	664	664	664	664	664	664	530	530	530	530
Total Expense	56,363	57,485	58,000	58,000	58,000	58,000	58,000	58,000	46,281	46,018	45,182	45,047

Welcome to Planning Analytics

IBM Planning Analytics has everything you need to help streamline planning for your organization. Take a tour or watch a demo to get started.

Watch a demo ▶

Quick Launch



Applications and Plans

Manage and contribute to planning processes and other applications



Reports and Analysis

Build reports and dashboards to analyze and communicate your results



Data and Models

Build the cubes, dimensions and rules to support your business

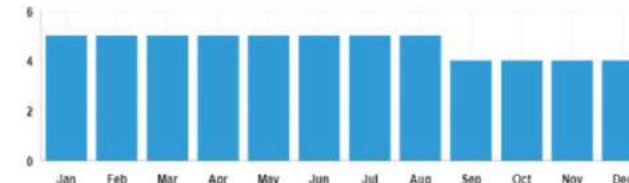


Administration

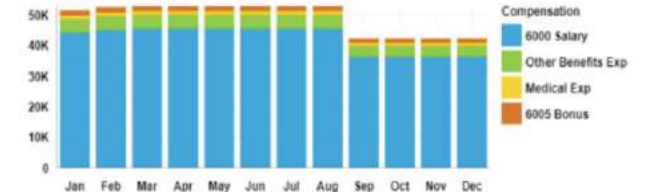
Keep your solution up and running

Your Applications Recents Favorites

FTE Review



Compensation Review



DATA TARGET

comping_

Web i Excel klijenti

IBM Cognos TM1 Application

You are a reviewer or contributor for:

Name	State	Permissions	Owner	Ownership Node	Reviewer	Last Data Commit
Hrvatska	Available		None	None	Cognos/DEM02	Never committed

Which consists of:

Name	State	Permissions	Owner	Ownership Node	Reviewer	Last Data Commit
Regija Zagreb	Available		None	None	Cognos/DEM02	Never committed
Regija Jug	Available		None	None	Cognos/DEM02	Never committed
Regija Istok	Available		None	None	Cognos/DEM02	Never committed
Regija Zapad	Available		None	None	Cognos/DEM02	Never committed

Workflow Detail for Hrvatska

Current status: Available

Viewed: No

Being Edited: No

Reviewed: No

IBM Cognos TM1 Web

Plan ocjena: Plan Prodaje

	- GODINA	1	2	3	4	5	6	7
Kolicina	23,180	3,370	1,865	2,269	2,250	1,876	1,775	2,298
Jedinična prodajna cijena	6,00	6,00	6,00	6,00	6,00	6,00	6,00	6,00
Bruto iznos	139,080,00	20,220,00	11,200,00	13,610,00	13,500,00	11,220,00	10,650,00	13,770,00
Popust kanala %	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00
Popust kanala	2,772,00	2,772,00	2,220,00	2,664,00	2,700,00	2,144,00	2,100,00	2,604,00
Dodatni popust %	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,00
Dodatni popust	3,772,00	2,772,00	2,220,00	2,664,00	2,700,00	2,144,00	2,100,00	2,604,00
Ukupni popust	6,544,00	5,544,00	4,440,00	5,324,00	5,400,00	4,288,00	4,200,00	5,208,00
Trosak prijevoza	5,452,04	8,808,84	4,788,88	5,663,32	5,292,00	4,008,00	3,864,00	4,784,64
Neto iznos	124,071,56	12,481,76	10,063,54	12,842,48	12,302,96	10,900,00	9,570,00	11,256,68
Jedinična cijena koštanja	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00
Iznos ulaza	369,930,00	1,930,00	5,595,00	7,190,00	6,810,00	5,810,00	5,320,00	6,252,00
Marža	56,370,56	5,534,76	4,468,54	5,302,48	5,462,88	4,802,52	4,250,00	4,954,68
Marža %	44,40	44,40	44,40	44,40	44,40	44,40	44,40	44,40
Kumulirana marža	65,207,56	6,078,76	10,547,30	15,849,78	19,312,66	16,510,16	12,260,16	17,214,84

Book2 [Compatibility Mode] - Excel

	Units	Price	Gross margin%	Sales	Variable Costs
Total Manufacturing	1,000,000	20,000	41.0%	1,187,085	700,000
Other Manufacturing	538,462	10,769	41.0%	639,199	376,923
Northeast	96,154	1,923	41.0%	114,143	67,308
	134,615	2,692	41.0%	159,800	94,231
	115,385	2,308	41.0%	136,971	80,769
	115,385	2,308	41.0%	136,971	80,769

Regional Sales

Bar chart showing sales for Northeast, Southern, Midwest, and West regions.

Plan prodaje | Reserved | Regija Zagreb - Google Chrome

Not secure | patest.zg.megatrend.net:9510/tm1web/Contributor.jsp

Jedinična cijena: Plan Prodaje

	- GODINA	1	2	3	4	5	6	7	8	9	10	11	12
Kolicina	410,475	40,000	30,000	36,350	33,882	34,169	31,742	34,449	27,299	38,923	38,664	35,238	29,540
Jedinična prodajna cijena	18,43	15,83	17,98	16,45	18,44	20,03	18,45	18,11	20,45	18,50	18,65	19,98	20,69
Bruto iznos	7,567,580,00	673,784,25	538,705,77	6,074,000	6,148,800	6,841,900	5,851,700	6,238,900	5,580,000	7,200,000	7,200,000	7,041,600	6,111,600
Popust kanala %	2,12	2,13	2,13	2,11	2,13	2,11	2,11	2,13	2,13	2,12	2,12	2,11	2,13
Popust kanala	162,122,41	14,339,68	11,448,93	12,630,62	13,288,56	14,451,00	12,387,32	13,261,01	11,840,25	15,273,63	15,314,07	14,867,53	13,019,71
Dodatni popust %	2,13	2,13	2,13	2,12	2,14	2,13	2,14	2,15	2,14	2,13	2,12	2,11	2,13
Dodatni popust	162,862,49	14,345,96	11,454,82	12,641,16	13,382,36	14,653,32	12,509,81	13,389,08	11,943,18	15,339,90	15,344,26	14,880,34	13,025,95
Ukupni popust	324,984,90	28,685,60	22,903,76	25,271,78	26,670,92	29,104,32	24,897,13	25,650,09	23,783,43	30,613,53	30,658,33	29,747,87	26,045,66
Trosak prijevoza	338,856,95	30,096,03	23,508,25	31,022,00	32,304,04	25,861,24	25,688,59	26,959,66	22,511,90	30,173,88	33,032,63	28,022,90	26,164,82
Neto iznos	6,983,738,01	615,912,66	492,310,76	5,410,800	5,665,834	6,291,195	5,351,128	5,681,215	4,927,249	6,600,000	6,600,000	6,454,417	5,668,620
Jedinična cijena koštanja	9,78	8,93	9,46	8,73	9,74	10,44	9,66	9,53	10,47	9,72	9,86	10,30	10,69
Iznos ulaza	4,005,887,97	387,225,82	283,810,96	317,510,00	330,176,00	356,817,50	306,698,50	328,199,50	286,776,00	378,301,00	383,286,50	362,975,50	316,648,50
Marža	2,977,850,43	256,887,04	208,802,82	224,110,43	235,661,14	272,301,85	228,452,78	240,015,75	226,080,11	281,973,59	277,721,54	283,488,67	243,236,02
Marža %	42,84	41,84	42,41	41,38	41,65	43,28	42,69	42,25	44,97	42,62	42,01	43,85	43,53
Kumulirana marža	2,977,850,43	256,887,04	465,689,86	690,802,98	926,464,12	1,197,765,97	1,426,218,75	1,666,234,50	1,892,310,61	2,170,324,20	2,451,045,74	2,734,534,41	2,977,850,43

IBM Planning Analytics Workspace

The main interface of the IBM Planning Analytics Workspace. It features a top navigation bar with 'Home' and 'Admin' options. Below is a 'Quick Launch' section with four main categories: 'Applications and Plans' (Manage and contribute to planning processes and other applications), 'Reports and Analysis' (Build reports and dashboards to analyze and communicate your results), 'Data and Models' (Build the cubes, dimensions and rules to support your business), and 'Administration' (Keep your solutions up to date). Below these are tabs for 'Your Applications', 'Recents', and 'Favorites'. Two application cards are visible: 'Headcount' (Assets related to headcount, grouped by region) and 'Compensation' (Year-end compensation plan). Both cards show a 'Last modified' timestamp of 09/21/2020 2:59 PM.

The 24Retail Application Portal interface. It features a top navigation bar with 'Portal' and 'Application Portal' options. Below is a 'Corporate Plan Review' section with buttons for 'Income Statement' and 'Departmental P&L'. To the right is an 'Analysis' section with buttons for 'Headcount' and 'Operating Expenses'. Further right is a 'Revenue Plan' section with buttons for 'Products', 'Units', and 'Supply Chain'. An 'About this Portal' section on the far right explains that the portal helps streamline contributions to 24 Retail financial data and allows navigation between multiple books.

A web browser window displaying a perspective view of a data cube. The URL is patest.zg.megatrend.net/?perspective=book&id=new_1600440922459. The interface shows a 'Data' pane on the left with a tree view of dimensions and measures. The main area displays a table with columns for 'Description', 'Purchase C...', 'Purchase P...', 'In-Servic...', and 'Project C...'. The table shows data for 'Budget V2', 'Variance', 'Variance%', 'Explanation', 'Performance Va...', 'Ccy Exchange ...', 'Budget', 'Actual', and 'Actual'.

The 24Retail Total Company Dashboard interface. It features a top navigation bar with 'Dashboards' and '24Retail Dashboard' options. Below is a 'Total Company Dashboard' section with a 'Select a Quarter' dropdown set to 'Month Q2'. Key metrics are displayed: Gross Revenue (25.9M), Gross Margin (10M), Cost of Sales (13.3M), and Operating Expense (3.82M). The dashboard includes a 'Units Sold by Organization' map of the United States, a 'Monthly Net Profit by Version' line chart, and a 'Gross Margin by Organization' bar chart. The bar chart shows data for Florida, Massachusetts, Washington, Ontario, British Columbia, Michigan, California, and New York.



IBM Planning Analytics for MS Excel

The screenshot displays the IBM Planning Analytics interface within Microsoft Excel. The ribbon includes tabs for FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, VIEW, and DEVELOPER. The 'IBM Planning Analytics' tab is active, showing options like Connect, Task Pane, Options, Help, Open, Publish, Exploration, List, Action Button, Refresh Sheet, Commit, Clear, Discard, Snapshot, MDX, Properties, Overview, Use Server Formats, Convert To, New, Rename, Clone, Delete, and Merge.

The main workspace shows a PivotTable with the following data:

	Units	Price	Gross margin%	Sales	Variable Costs
Total Manufacturing	1,000,000	20,000	41.0%	1,187,085	700,000
Other Manufacturing	538,462	10,769	41.0%	639,199	376,923
Northeast	96,154	1,923	41.0%	114,143	67,308
Southern	134,615	2,692	41.0%	159,800	94,231
Midwest	115,385	2,308	41.0%	136,971	80,769
West	115,385	2,308	41.0%	136,971	80,769

A bar chart titled 'Regional Sales' is displayed, showing sales for Northeast, Southern, Midwest, and West. The Y-axis ranges from 0 to 150,000. The bars represent sales for each region: Northeast (~114,143), Southern (~159,800), Midwest (~136,971), and West (~136,971).

The PivotTable field list on the right shows the following structure:

- TopShelf
- Workbook
 - Sports
 - brewery location
 - Subsets
 - Private subsets
 - Levels
 - Members
 - Total Manufacturing
 - Other Manufacturing
 - Northeast
 - Southern
 - Midwest
 - West
 - CustomerTarget
 - Drive
 - EngineSize
 - EngineType
 - Leaves
 - ModelType

Funkcionalnosti

- ETL alat
- procesi
- real-time izračuni

The screenshot displays the Data Target software interface. On the left is a navigation pane with a tree view of processes, including 'Add_Product' which is highlighted. The main workspace is divided into two panes. The top pane shows a code editor for a process named 'Add_Product', containing a section of PL/SQL code for generating statements and inserting dimension elements. The bottom pane shows a data table for 'Organization' with columns for 'id', 'Default Plant', 'Currency', 'Caption_De...', and 'Caption_B...'. The table lists entries for 'East Region' (Massachusetts, Maryland, Florida) and 'Central Region' (Michigan).

```
What do you want to assemble? For example, Revenue by Year
```

Sheet 1

24retail Add_Product

```
Prolog Epilog
#Section Prolog
1
2 *****Begin: Generated Statements***
3 *****End: Generated Statements***
4
5 pParent=DimensionElementPrincipalName('Product',pParent);
6
7
8 DimensionElementInsert('Product','',pNewNumber,'N');
9
10 DimensionElementComponentAdd('Product',pParent,pNewNumber,1);
11
12 ###Check for Required Subsets###
13
14 IF (SubsetExists('Product', 'New')=0);
15 SubsetCreate('Product', 'New');
16 ENDIF;
17
18 IF (SubsetExists('Product', 'Compare')=0);
19 SubsetCreate('Product', 'Compare');
20 ENDIF;
```

24retail Income Statement

```
1 #Region System
2 FEEDSTRINGS;
3 SKIPCHECK;
4 UNDEFVALS;
5 #EndRegion
6
7
8 #['y1', 'Actual', 'Local']=STET;
9
10 #Region ROW FORMAT
11 ['RowFormat',{ '6000', '6005', '6010', '6015', '6300', '6310', '6320'}]=N:(-1)
12 ['RowFormat', 'Total Operating Expense']=2;
13 ['RowFormat']=IF(ELISANC('Account', 'TE', !Account)=1,
14 ELLEV('Account', !Account), STET);
15 #EndRegion;
16
17 #Region Year on Year Variances
18 ['Y2-Y1 %'] = ([Y2 - Y1 $] \ [Y1]) * 100;
19 ['Y2-Y1 $'] = IF(attn('Account', !Account, 'signswitch')=0, [Y1] - [Y2]
20 #EndRegion
21
22 #Region Currency Exchange Variances
```

organization	id	Default Plant	Currency	Caption_De...	Caption_B...
East Region	100		USD	East Region	East Region
Massachusetts	101	Plant A	USD	Massachus...	Massachus...
Maryland	102	Plant A	USD	Maryland	Maryland
Florida	103	Plant A	USD	Florida	Florida
Central Region	200		USD	Central Reg...	Central Re...
Michigan					

Funkcionalnosti

- Sandboxing
- Drill-through
- Metričke kocke (Scorecardi), Dashboardi, vizualizacije
- Self-service
- Funkcije brzog unosa i raspodjele

	Status	Trend	Projected Acc.	Target	Tolerance
Customer count	Red	Down	687	945	5%
Product count	Green	Down	775	756	5%
Customer survey	Red	Flat	71.8%	80.0%	5%
Product survey	Green	Up	84.7%	75.0%	5%
Campaign count	Green	Flat	1,424	252	5%

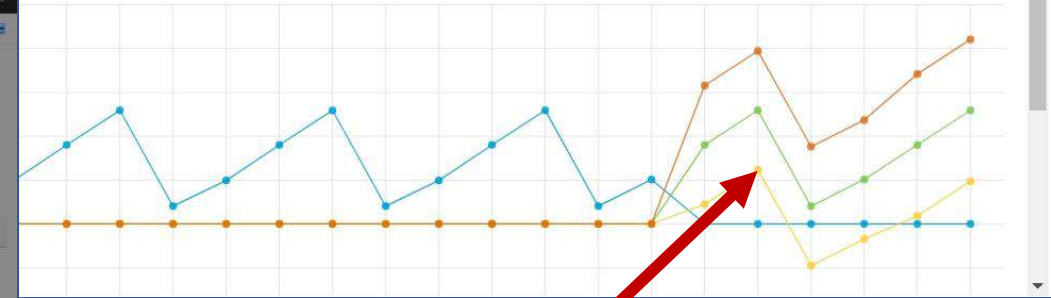
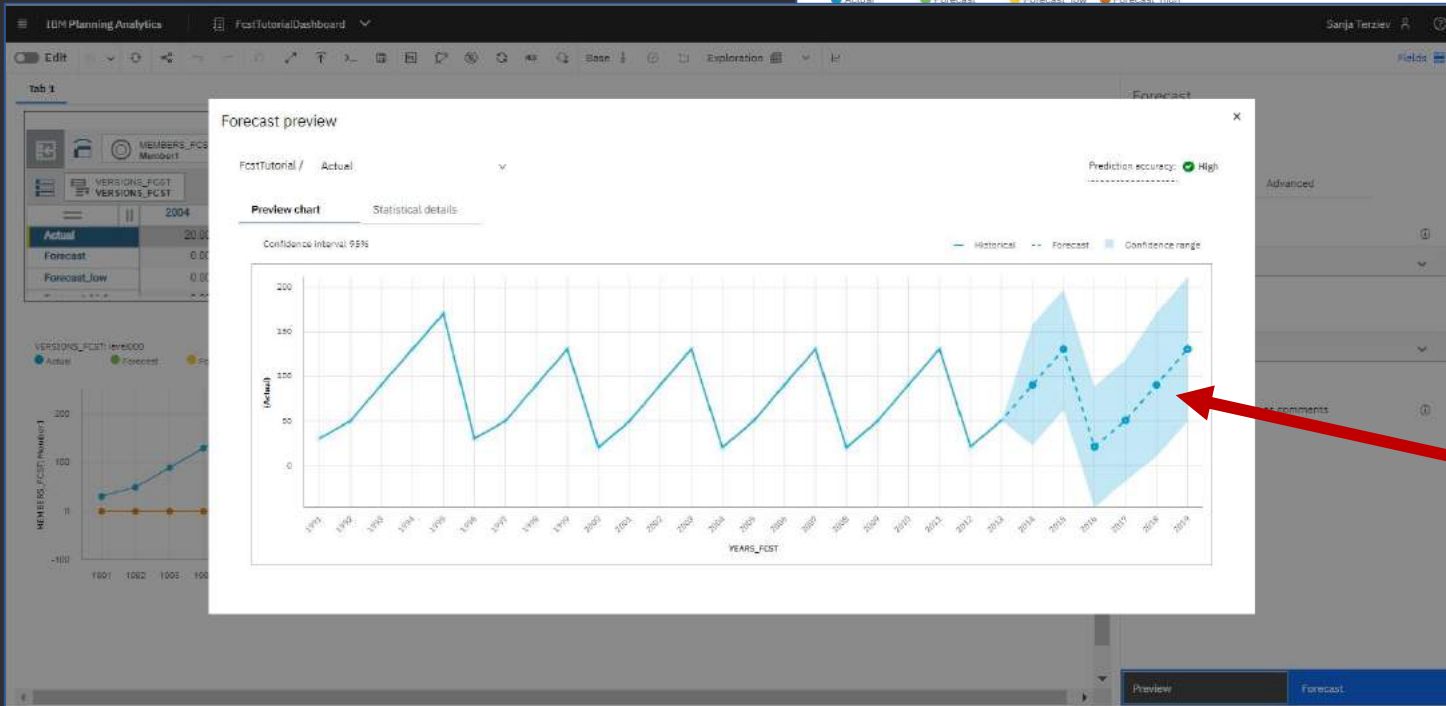
	Q1	Q2
4999 Gross Revenue	167,708,587	155,234,380
5999 Cost of Sales	25,729,687	15,670,063
Gross Margin	141,978,899	139,564,317
Total Operating Expense	9,512,964	8,284,619
6099 PAYROLL	864,688	953,539
6199 OFFICE EXPENSE	208,145	193,398
6299 TRAVEL	117,256	117,256
6399 OCCUPANCY	951,873	666,793
6499 MARKETING	7,215,486	5,831,137
6599 DEPRECIATION	155,517	522,496

Forecasting i predikcija (u PAW)

IBM Planning Analytics | FcstTutorialDashboard | Sanja Terziev

Tab 1

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Actual	20.00	50.00	90.00	130.00	20.00	50.00	90.00	130.00	20.65	50.47	0.00	0.00	0.00	0.00	0.00	0.00
Forecast	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.47	130.00	20.65	50.47	90.47	130.00
Forecast_Low	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.77	62.30	-47.06	-17.23	9.54	49.07
Forecast_High	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.17	197.70	88.35	118.17	171.40	210.93



otkrivanje i modeliranje trendova, sezonalnosti i vremenske ovisnosti u podacima

Ključne koristi nakon uvođenja sustava

63%

Reduction in labor time needed to complete the annual budgeting cycle

80%

Faster processing of planning data

70%

Fewer labor hours required to complete forecasting cycles

izvor: Forrester Research commissioned by IBM, The Total Economic Impact™ Of IBM Planning Analytics, October 2019.

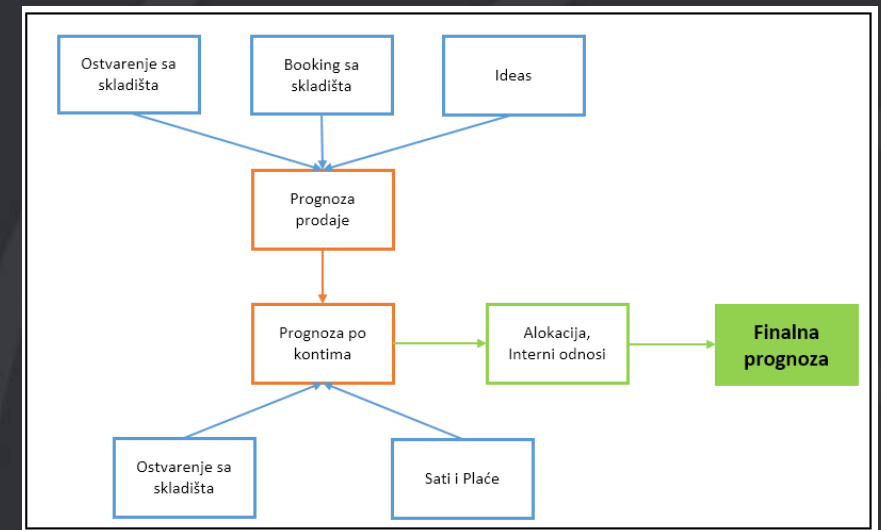
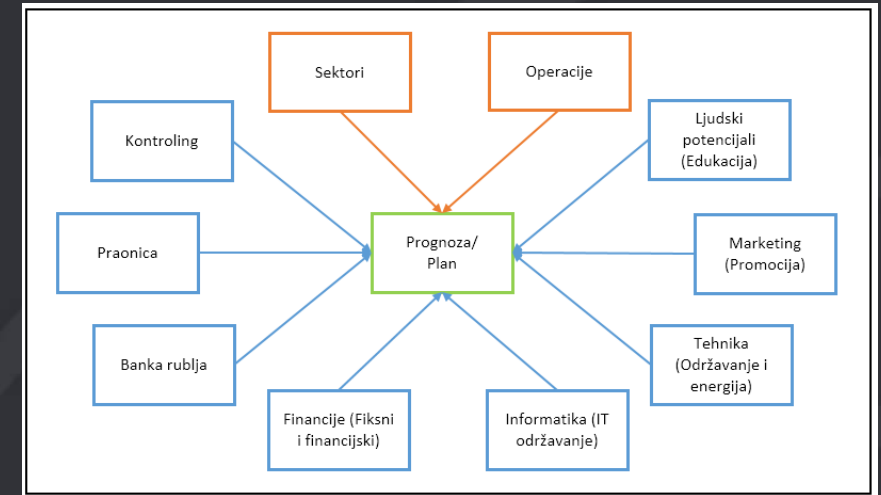


DATA TARGET

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Primjer iz prakse – VALAMAR GRUPA

- BI odjel unutar Sektora za strateško planiranje i kontroling
- izvještajni sustav 2004, prvi model za planiranje 2006, integrirano DWH 2015
- prodaja – financijski i nefinancijski, dan
- po kontima – USALI, mjesec
- konsolidacija - alokacije, interni odnosi
- **kontinuirano prognoziranje**



„Plan is nothing, planning is
everything“

Dwight E. Eisenhower



Hvala!

sanja.terziev@datatarget.eu



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