

Sustavi za podršku kontrolingu temeljeni na IBM Cognos tehnologiji

Zagreb, 24.09.2015.

Poslovna inteligencija d.o.o.
Slađana Krpić

Sadržaj

- **Poslovna inteligencija – o nama**
- **Zašto i kada nam treba sustav za podršku kontrolingu**
- **Projekt uvođenja sustava za podršku kontrolingu**
- **Kako odabratи pravi alat**
- **IBM Cognos – podrška za planiranje, izvještavanje, analizu i strateški management**



O nama

- Vodeći implementator DWH/BI rješenja u JIE
- 90+ zaposlenika
 - 75 konzultanata
 - preko 400 čovjek-godina iskustva
- Preko 80 korisnika u 14 godina
- Više od 150 uspješno dovršenih projekata



HRV (2001.)
SRB (2006.)
CG (2008.)
SLO (2010.)
BIH (2010.)
UK (2011.)



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 PANORAMA



•••••
informatica



Business Intelligence
Data Management Solutions



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Naša područja djelovanja

**Strateški ICT
konzalting**



Naše reference

Telekomunikacije	Bankarstvo	Maloprodaja Distribucija	Proizvodnja	Javni sektor
       	     	     	      	     

Cilj kontrolinga

Od podataka stvaraju informaciju koja služi kao znanje pri donošenju dobre poslovne odluke

Podaci nisu informacija!
Informacija = Podaci + Struktura

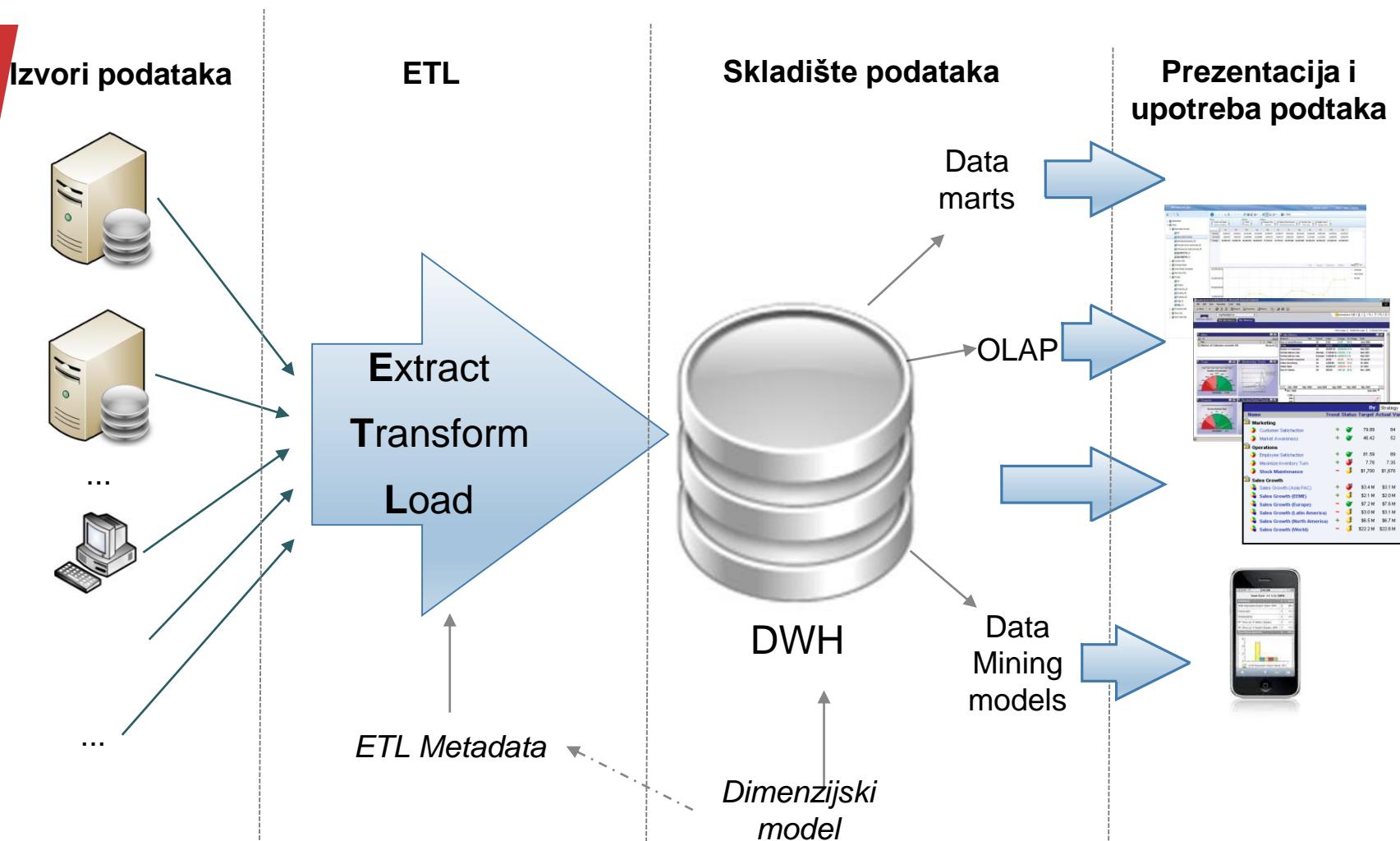
Informacija nije znanje!
Znanje = Informacija + Analiza

Znanje nije odlučivanje!
Odluka = Znanje + Ljudski faktor

Zašto trebamo sustav za podršku kontrolingu?

- Koji(e) proces(e) želimo podržati:
 - **Konsolidacija** podataka iz različitih izvora?
 - Izvještavanje nad **raspoloživim** podacima?
 - Izvještavanje nad **dodatno preoblikovanim/obogaćenim** podacima?
 - Izračun **profitabilnosti**?
 - **Simulacije** budućih posljedica današnjih odluka?
 - Pronalaženje **skrivenih trendova** u podacima?
 - **Planiranje? (Rolling) forecast? Prognoze?**
 - Standardizacija **vizualizacije**?
 - **BSC**?
 - ...

Tipična arhitektura sustava



Kako definirati projekt za uvođenje sustava za podršku kontrolingu?

- Različiti pristupi organizaciji projekata
- Preporuka -> Sagledati veliku sliku i osnovni cilj projekta, izvršavati korak po korak
 1. Definirati procese koje dugoročno želimo podržati -> **CILJ** i **OPSEG** sustava
 2. Prioritizirati zahtjeve i vremenski okvir-> **FAZE** i **PROJEKTNI PLAN** budućeg projekta
 3. Identificirati vlasnike procesa - >**KLJUČNI ČLANOVI PROJEKTNOG TIMA**

Vremenski okvir projekta

- Ovo **nije jednokratni projekt**
 - „projekt” koji nikad ne završava
 - ako za to niste spremni, ne započinjite
- Kompanije trebaju težiti razvoju **BI kulture**, a Kontroling u tome treba imati ključnu ulogu
 - Odluke se donose bazirano na činjenicama
 - U donošenju odluka sudjeluju gotovo svi zaposlenici
 - Učinkovitost pojedinca ovisi o raspoloživosti informacija
 - Dostup do BI sustava treba svima
 - Informacije se dijele i potiče se transparentnost

Potrebni resursi za realizaciju projekta

- **Podaci**
 - Gdje se nalaze podaci?
 - Kakve su kvalitete?
 - Imamo li sve potrebne podatke?
- **Ljudski resursi**
 - Vođenje projekta
 - Definicija zahtjeva i testiranje -> Vremenski zahtjevno!
 - Implementacija
- **IT infrastruktura**
 - HW i SW
 - Odabir pravog alata

Kako osigurati uspješnost projekta?

- Osigurati adekvatnu podršku managementa
- Osigurati **raspoloživost i dediciranost članova tima**
- Težiti ostvarenju **dugoročnih ciljeva kroz male korake**
- Imati jasnu sliku o **raspoloživosti i kvaliteti podataka**
- Odabrati **alate** koji mogu zadovoljiti sve vaše potrebe

Kako odabrati pravi alat?

- Imati na umu sve procese i zahtjeve koje želite podržati -> provjeriti **funkcionalnosti** alata
- **Skalabilnost** alata koja podržava rast poduzeća
- Provjeriti **reference** alata i implementatora
- Osigurati adekvatnu podršku i raspoloživost **partnera** za **implementaciju**
- Uspoređivati alate prema unaprijed **definiranim kriterijima**

IBM Cognos - Integracija analitičkih sustava

Reporti, dashboard-i i planski modeli kreirani
pomoću IBM Cognos alata (BI, TM1, SPSS)



Prediktivna analitika

Temporal Causal Modeling

- Otkrivanje kauzalnih veza
- Procjenjivanje lead-lag indikatora
- Procjenjivanje snage veza između pokazatelja



Planiranje i praćenje performansi

Integrirana analika

- Otkrivanje problema pomoću definiranih KPI-eva
- Analiziranje uzroka preko uzročno posljedičnih veza
 - Procjena utjecaja alternativnih scenarija
 - Omogućeno brzo i efikasno donošenje odluka
 - Podrška procesu planiranja

Advanced analytics increase visibility, insight and control over performance



What – if analize

Scenario Planning

- Multidimenzionalne poslovne stukture
 - Procjena utjecaja različitih pretpostavki
 - Instantno izvještavanje o alternativnim senarijima



Podaci

Data Warehouse

Data Integration

Izvorni sustavi– ERP, G/L, Legacy Systems

Obogaćivanje tradicionalnog BI sa prediktivnom analitikom i what if scenarijima

Procjenite utjecaj alternativnih scenarija i omogućite efikasnije i lakše **donošenje odluka**



Kreirajte osnovni forecast i **alternativne scenarije**



Kako?

Identificirajte uzrok i predvidite buduće stanje koristeći **prediktivne modele**



Što da radimo?



Na pravom putu?



Zašto?

Koristite povijesne podatke za utvrđivanje **uzročno posljedičnih veza** između operativnih drivera i finansijskih rezultata

Mjerite i pratite ostvarenje planova i odstupanja

Executive dashboard

Company Logo

Link to ERP Web Interface

Report List

Financial reports

What-if analysis

Actual vs Budget vs Forecast

Traffic light indicators

Risk Status indicators

Metric trending

Predictive Analytics

Measuring Period	2011 Fiscal YTD			2011 Full Fiscal Year			Rolling 12 mo. Fct	Trends	Risk	TCM
	Actual	Target	Budget	Forecast	Variance					
EBITDA	\$99,958,803	\$90,500,917	\$139,151,262	\$121,463,095	-13% ■	\$119,227,086	Link	■	●	
Net Income	\$43,506,230	\$38,406,045	\$59,386,062	\$42,599,047	-28% ■	\$41,879,335	Link	■	●	
ROIC	15%	12%	12%	2%	-9% ■	9%	Link	■	●	
Operating Profit%	39%	39%	39%	34%	-5% ◆	34%	Link	■	●	
Operational Revenue Management	2011 Fiscal YTD			2011 Full Fiscal Year			Rolling 12 mo. Fct	Trends	Risk	TCM
	Actual	Target	Budget	Forecast	Variance					
Gross Sales	\$418,367,062	\$413,674,560	\$632,399,040	\$590,339,683	-7% ■	\$582,282,307	Link	■	●	
Avg. Sales Value/Unit	\$747	\$692	\$691	\$748	8% ●	\$748	Link	■	●	
Price Realization	60%	56%	56%	60%	4% ●	59%	Link	■	●	
Market Share ⚠	95%	95%	96%	96%	0% ◆	96%	Link	■	●	
Operational Expense Management	2011 Fiscal YTD			2011 Full Fiscal Year			Rolling 12 mo. Fct	Trends	Risk	TCM
	Actual	Target	Budget	Forecast	Variance					
SG&A%	21%	21%	21%	27%	■	■	Link	■	●	
Gross Margin%	60%	59%	59%	61%	●	●	Link	■	●	
Material Cost%	20%	20%	20%	19%	●	●	Link	■	●	
Distribution Expense%	5%	5%	5%	9%	4% ◆	9%	Link	■	●	
Headcount ⚠	6,352.0	6,405.0	6,397.0	6,402.0	0% ●	6,384.0	Link	■	●	
Credit Management	2011 Fiscal YTD			2011 Full Fiscal Year			Rolling 12 mo. Fct	Trends	Risk	TCM
	Actual	Target	Budget	Forecast	Variance					
Capital Efficiency	\$9	\$7	\$9	\$9	1% ●	\$9	Link	■	●	
Quick Ratio	32.3	32.3	33.6	34.3	2% ●	31	Link	■	●	
DSO	29.2	29.4	50.1	56.8	13% ■	27.3	Link	■	●	
Days Payable	18.0	17.5	21.9	30.9	41% ●	16.2	Link	■	●	
Days in Inventory	12.7	12.5	15.3	15.5	1% ●	11.4	Link	■	●	
Bad Debt Write-off	\$1,732,948	\$1,853,660	\$2,470,406	\$2,866,504	16% ■	\$2,858,174	Link	■	●	

What-if analiza

poslovna
inteligencija
Poslovna means Business

DSO Analysis - By Customer

Customer	What-if (Branch Manager) - Sales Amount	What-if (Branch Manager) - Previous Sales	What-if (Branch Manager) - Balance (\$)	What-if (Branch Manager) - DSO	Forecast - DSO
SKW Corporation U.S.	\$600,000,000	\$600,000,000	\$600,000,000	80	60
Ensign US Manufacturing	\$500,000,000	\$500,000,000	\$500,000,000	70	50
Pegan Auto Ltd.	\$400,000,000	\$400,000,000	\$400,000,000	60	40
Singh Production Ltd.	\$300,000,000	\$300,000,000	\$300,000,000	50	30
Atlantic Tech Group	\$200,000,000	\$200,000,000	\$200,000,000	40	20
Armstrong South Associates	\$100,000,000	\$100,000,000	\$100,000,000	30	10
Chicago Electronics Trade	\$100,000,000	\$100,000,000	\$100,000,000	30	10
International Tooling Ltd.	\$100,000,000	\$100,000,000	\$100,000,000	30	10
Stahl & Kent Co.	\$100,000,000	\$100,000,000	\$100,000,000	30	10
Miller Technologies Inc.	\$100,000,000	\$100,000,000	\$100,000,000	30	10
Mitsuwa Ltd.	\$100,000,000	\$100,000,000	\$100,000,000	30	10
New Ying Electronics	\$100,000,000	\$100,000,000	\$100,000,000	30	10
Motorco Corp.	\$100,000,000	\$100,000,000	\$100,000,000	30	10
JK Express Systems	\$100,000,000	\$100,000,000	\$100,000,000	30	10
TYSCO Ltd.	\$100,000,000	\$100,000,000	\$100,000,000	30	10

DSO Analysis - By Period

Period	What-if (Branch Manager) - Sales Amount	What-if (Branch Manager) - DSO	Forecast - DSO
Jan	\$500,000,000	35	35
Feb	\$550,000,000	25	25
Mar	\$600,000,000	20	20
Q1	\$650,000,000	18	18
Apr	\$700,000,000	15	15
May	\$750,000,000	15	15
Jun	\$800,000,000	15	15
Q2	\$850,000,000	15	15
Jul	\$900,000,000	15	15
Aug	\$950,000,000	15	15
Sep	\$1,000,000,000	15	15
Q3	\$1,050,000,000	15	15
Oct	\$1,100,000,000	15	15
Nov	\$1,150,000,000	15	15
Dec	\$1,200,000,000	15	15
Q4	\$1,250,000,000	15	15
Total Year	\$1,300,000,000	15	15

Balance Sheet

Rows: Month [Month] Columns: BalanceSheetMeasure [BalanceSheetMeasure] Scenario [Scenario] Context: 2011 [Year] NewYork [Organization] Balance [BSChange] TransactionCurrency [Currency]

Month	BalanceSheetMeasure	Scenario	shAndCashEquivalents			Receivables			AccountsReivable		
			Forecast	WhatIfBranchManager	Actual	Forecast	WhatIfBranchManager	Actual	Forecast	WhatIfBranchManager	Actual
Jan	\$6,043,683	\$6,043,683	\$890,048	\$565,327	\$565,327	\$1,174,106	\$851,346	\$851,346	\$851,346	\$851,346	\$851,346
Feb	\$6,063,261	\$6,063,261	\$964,322	\$921,288	\$921,288	\$1,281,917	\$1,229,142	\$1,229,142	\$1,229,142	\$1,229,142	\$1,229,142
Mar	\$6,452,677	\$6,452,677	\$919,138	\$1,282,097	\$1,282,097	\$1,282,097	\$1,282,097	\$1,282,097	\$1,266,272	\$1,608,563	\$1,608,563
Q1	\$6,452,677	\$6,452,677	\$919,138	\$1,282,097	\$1,282,097	\$1,266,272	\$1,266,272	\$1,266,272	\$1,608,563	\$1,608,563	\$1,608,563
Apr	\$7,268,901	\$7,268,901	\$813,335	\$545,354	\$545,354	\$1,182,202	\$891,026	\$891,026	\$891,026	\$891,026	\$891,026
May	\$7,293,403	\$7,293,403	\$793,665	\$954,486	\$954,486	\$1,186,020	\$1,312,785	\$1,312,785	\$1,312,785	\$1,312,785	\$1,312,785
Jun	\$7,794,621	\$7,794,621	\$523,661	\$781,585	\$781,585	\$781,585	\$781,585	\$781,585	\$943,337	\$1,144,311	\$1,144,311
Q2	\$7,794,621	\$7,794,621	\$523,661	\$781,585	\$781,585	\$781,585	\$781,585	\$781,585	\$1,144,311	\$1,144,311	\$1,144,311
Jul	\$7,668,586	\$7,668,586	\$1,588,185	\$1,414,373	\$1,414,373	\$2,035,850	\$1,794,504	\$1,794,504	\$1,794,504	\$1,794,504	\$1,794,504
Aug	\$7,629,653	\$7,629,653	\$1,904,649	\$2,616,931	\$2,616,931	\$2,375,510	\$3,007,757	\$3,007,757	\$3,007,757	\$3,007,757	\$3,007,757
Sep	\$9,273,280	\$9,273,280	\$1,734,910	\$1,842,449	\$1,842,449	\$2,218,459	\$2,257,763	\$2,257,763	\$2,257,763	\$2,257,763	\$2,257,763
Q3	\$9,273,280	\$9,273,280	\$1,734,910	\$1,842,449	\$1,842,449	\$2,218,459	\$2,257,763	\$2,257,763	\$2,257,763	\$2,257,763	\$2,257,763
Oct	\$9,044,453	\$9,044,453	\$0	\$3,177,950	\$3,177,950	\$0	\$3,610,775	\$3,610,775	\$0	\$3,610,775	\$3,610,775
Nov	\$6,617,801	\$6,617,801	\$0	\$6,589,976	\$6,589,976	\$0	\$7,048,932	\$7,048,932	\$0	\$7,048,932	\$7,048,932
Dec	\$4,502,247	\$4,502,247	\$0	\$9,567,208	\$9,567,208	\$0	\$10,051,487	\$10,051,487	\$0	\$10,051,487	\$10,051,487
Q4	\$4,502,247	\$4,502,247	\$0	\$9,567,208	\$9,567,208	\$0	\$10,051,487	\$10,051,487	\$0	\$10,051,487	\$10,051,487
Total Year	\$4,502,247	\$4,502,247	\$1,734,910	\$9,567,208	\$9,567,208	\$2,218,459	\$10,051,487	\$10,051,487	\$0	\$10,051,487	\$10,051,487

DSO What-if Analysis

Rows: Month [Month] Columns: CustomerPaymentSummaryMeasure [CustomerPaymentSummaryMeasure] Context: 2011 [Year] TotalBusinessUnit [BusinessUnit] NewYork [Organization] SKWCorporationUS [Customer]

Month	CustomerPaymentSummaryMeasure	Hidden							
		Debit	Credit	SalesAmount	PreviousSales	AccountsReivable	DSO	BadDebtAllowance	BadDebtWriteOff
Jan	\$5,476,599	\$4,612,461	\$1,672,855	\$3,888,053	\$851,346	15.78	\$21,416	\$12,792	\$13,489
Feb	\$2,916,757	\$1,678,006	\$2,065,411	\$1,672,855	\$1,229,142	17.26	\$22,183	\$9,608	\$9,260
Mar	\$3,722,243	\$2,100,250	\$2,493,101	\$2,065,411	\$1,608,563	20.00	\$19,015	\$13,431	\$13,028

DSO What-if Analysis

Promjena dana potraživanja

DSO What-if Analysis										
Rows:	Columns:	CustomerPaymentSummaryMeasure [CustomerPaymentSummaryMeasure]			Context:	2011 [Year]	TotalBusinessUnit [BusinessUnit]	NewYork [Organization]	SKWCorporationUS [Customer]	
	Month [Month]	Debit	Credit	SalesAmount	PreviousSales	AccountsReceivable	DSO	BadDebtAllowance	BadDebtWriteOff	Bad
Mar	\$3,722,243	\$2,100,250	\$2,493,101	\$2,065,411	\$1,608,563	20.00	\$19,015	\$13,431		
+ Q1	\$13,706,608	\$8,390,717	\$6,231,367	\$2,065,411	\$1,608,563	23.49	\$62,614	\$35,831		
Apr	\$3,298,722	\$2,399,610	\$1,690,159	\$2,493,101	\$891,026	15.82	\$7,565	\$8,086		
May	\$3,030,933	\$1,705,597	\$2,139,907	\$1,690,159	\$1,312,785	19.02	\$11,956	\$12,551		
Jun	\$3,222,302	\$2,063,330	\$1,909,517	\$2,139,907	\$1,144,311	17.98	\$8,282	\$14,661		
+ Q2	\$9,461,826	\$6,168,537	\$5,739,583	\$2,139,907	\$1,144,311	18.14	\$37,803	\$35,298		
Jul	\$3,702,553	\$1,892,842	\$2,558,242	\$1,909,517	\$1,794,504	21.75	\$24,102	\$15,206		
Aug	\$5,261,292	\$2,239,100	\$3,466,788	\$2,558,242	\$3,007,757	26.90	\$15,944	\$14,436		
Sep	\$5,998,379	\$3,722,866	\$2,990,622	\$3,466,788	\$2,257,763	22.65	\$22,808	\$17,750		
+ Q3	\$12,237,954	\$7,854,808	\$9,015,652	\$3,466,788	\$2,257,763	23.04	\$62,854	\$47,392		
Oct	\$5,758,227	\$2,134,842	\$3,500,464	\$2,990,622	\$3,610,775	30.57	\$21,661	\$12,611		
Nov	\$7,375,297	\$2,975,520	\$3,764,522	\$3,500,464	\$4,391,942	35.00	\$22,937	\$7,834		
Dec	\$8,340,042	\$3,876,276	\$3,948,100	\$3,764,522	\$4,457,532	35.00	\$22,040	\$6,234		
+ Q4	\$17,211,465	\$8,986,638	\$11,213,086	\$3,764,522	\$4,457,532	35.00	\$66,638	\$26,679		
+ TotalYear	\$17,211,465	\$8,986,638	\$11,213,086	\$3,764,522	\$4,457,532	36.57	\$229,909	\$145,200		

DSO Analysis - By Customer

DSO Analysis - By Period

Balance Sheet

Promjena ukupnih potraživanja

Month	BalanceSheetMeasure	Scenario	Context					
Jan	Actual	Forecast	What-if Branch Manager	Actual	Forecast	What-if Branch Manager	Actual	Forecast
Feb	\$6,043,683	\$890,048	\$565,327	\$565,327	\$1,174,106	\$851,346	\$851,346	\$284,058
Mar	\$6,063,261	\$964,322	\$921,288	\$921,288	\$1,281,917	\$1,229,142	\$1,229,142	\$317,595
Q1	\$6,452,677	\$919,138	\$1,282,097	\$1,282,097	\$1,266,272	\$1,608,563	\$1,608,563	\$347,134
Apr	\$7,268,901	\$813,335	\$545,354	\$545,354	\$1,186,202	\$891,026	\$891,026	\$368,867
May	\$7,293,403	\$793,665	\$954,486	\$954,486	\$1,186,020	\$1,312,785	\$1,312,785	\$358,291
Jun	\$7,794,621	\$523,661	\$781,585	\$781,585	\$943,337	\$1,144,311	\$1,144,311	\$419,676
Q2	\$7,794,621	\$523,661	\$781,585	\$781,585	\$943,337	\$1,144,311	\$1,144,311	\$419,676
Jul	\$7,668,586	\$1,588,185	\$1,414,373	\$1,414,373	\$2,035,850	\$1,794,504	\$1,794,504	\$447,665
Aug	\$7,629,653	\$1,904,649	\$2,616,931	\$2,616,931	\$2,375,510	\$3,007,757	\$3,007,757	\$470,861
Sep	\$9,273,280	\$1,734,910	\$1,842,449	\$1,842,449	\$2,218,459	\$2,257,763	\$2,257,763	\$483,549
Q3	\$9,273,280	\$1,734,910	\$1,842,449	\$1,842,449	\$2,218,459	\$2,257,763	\$2,257,763	\$483,549
Oct	\$9,044,453	\$0	\$3,177,950	\$3,177,950	\$0	\$3,610,775	\$3,610,775	\$432,821
Nov	\$9,274,791	\$0	\$6,589,976	\$6,589,976	\$0	\$7,048,932	\$7,048,932	\$458,958
Dec	\$10,096,202	\$0	\$9,567,208	\$9,567,208	\$0	\$10,051,487	\$10,051,487	\$457,532
Q4	\$10,096,202	\$0	\$9,567,208	\$9,567,208	\$0	\$10,051,487	\$10,051,487	\$484,271
TotalYear	\$10,096,202	\$1,734,910	\$9,567,208	\$9,567,208	\$2,218,459	\$10,051,487	\$10,051,487	\$484,271

DSO What-if Analysis

Month	CustomerPaymentSummaryMeasure	Context							
Mar	Debit	Credit	SalesAmount	PreviousSales	AccountsReivable	DSO	BadDebtAllowance	BadDebtWriteOff	BadDebtRepaid
Q1	\$13,706,608	\$8,390,717	\$6,231,367	\$2,065,411	\$1,608,563	20.00	\$19,015	\$13,431	\$13,028
Apr	\$3,298,722	\$2,399,610	\$1,690,159	\$2,493,101	\$891,026	15.82	\$17,565	\$8,086	\$9,727
May	\$3,030,933	\$1,705,597	\$2,139,907	\$1,690,159	\$1,312,785	19.02	\$11,956	\$12,551	\$13,222
Jun	\$3,222,302	\$2,063,330	\$1,909,517	\$2,139,907	\$1,144,311	17.98	\$8,282	\$14,661	\$10,806

IBM Cognos – upravljanje performansama



Povećanje efikasnosti

- Eliminacija ručnog rada -> Više vremena za „pametni“ posao
- Strukturiranje i automatizacija procesa
- Jednostavnije uključivanje većeg broja korisnika



Povećanje fleksibilnosti i povezivanje poslovnih područja

- Veza između strategije i operative
- Podrška za složene analitičke metode (npr. kreiranje scenarija, prediktivna analitika, what-if analize)
- Smanjenje vremena potrebnog za integraciju i koordinaciju poslovnih procesa
- Veća kontrola nad procesima planiranja, izvještavanja



Poboljšanje krajnih rezultata

- Značajno smanjenje mogućnosti pogreške
- Osigurava pouzdanost sustava i modela
- Potiče povjerenje u donošenje odluka na temelju informacija i analitičkih metoda

Hvala na pažnji!

Slađana

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