

SAS VISUAL ANALYTICS

En blick in i framtiden...



Carl-Olow Magnusson – Nordic Visualization/BI Senior Advisor



Jag kan INTE garantera att de funktioner som visas idag (eller det ni ser och fungerar idag) kommer i Visual Analytics i version xx.x ...

... demomiljön är en R&D image som förändras varje dag ...

**FRAMTIDENS
VISUAL ANALYTICS**

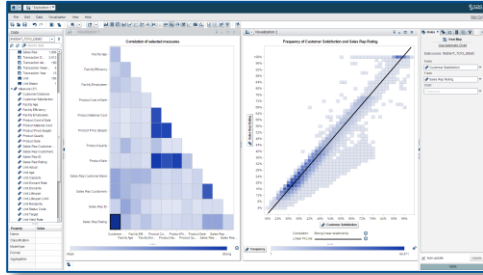


SAS[®] Viya[™]

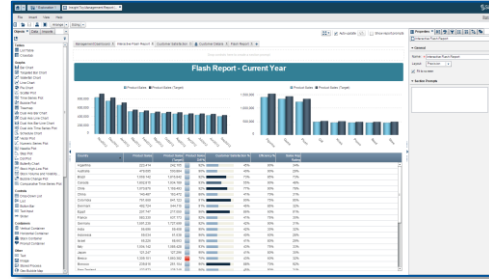
HTML5 vs. Flash



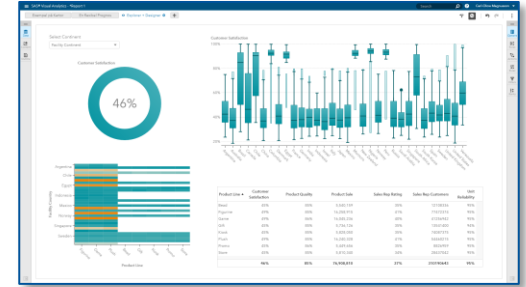
Varför allt i ett GUI?



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- Varför flera... ett GUI för oavsett vad du vill göra...
- Funktioner från både Designer och Utforskaren
- Graftyper från både Designern och Utforskaren
- Använda resultatet av avancerad analys direkt i våra rapporter/dashboards

DEMO

Det nya gränssnittet...

Vad innebär ArcGIS Online för Visual Analytics?

Nya Data Buildern

VISUAL ANALYTICS 8.1

Så här ser den ut...

SAS Visual Data Builder

INSIGHT_TOY_DEMO

TransactionDate	TransactionYear	TransactionMo...	TransactionWe...	SalesRepID	Order	Customer	LEFT_Customer	RIGHT_Custom...	CustomerLat	CustomerLon	CustomerDist...	Ci
16330.0	16330.0	16330.0	16330.0	178.0	TS400000388381	MXTIJUAN000012	MXTIJUAN000012		32.515795778395	-116.9189280104	5.5260859189547	0.3
16330.0	16330.0	16330.0	16330.0	2085.0	TS400000117250	NOOSLO.000175	NOOSLO	.000175188	59.941175194892	10.725670746585	2.757054012569C	0.4
16330.0	16330.0	16330.0	16330.0	1072.0	TS40000067314	PELIMA.0000765	PELIMA	.000076506	-11.95079275335	-77.12578210440	7.9489177371647	0.5
16330.0	16330.0	16330.0	16330.0	150.0	NBD0000033648C	USALBUQU00001	USALBUQU00001		35.111723874151	-106.5040098569	8.3947478552405	0.2
16330.0	16330.0	16330.0	16330.0	150.0	NDS0000033647E	USALBUQU00001	USALBUQU00001		35.209078740506	-106.7082149389	9.2627735138243	0.2
16330.0	16330.0	16330.0	16330.0	150.0	NDS0000033647E	USALBUQU00001	USALBUQU00001		35.209078740506	-106.7082149389	9.2627735138243	0.2
16330.0	16330.0	16330.0	16330.0	2372.0	TS400000388386	USBALTIM000198	USBALTIM000198		39.15827987701C	-76.68301069113	9.9570146270205	0.3
16330.0	16330.0	16330.0	16330.0	959.0	NDS0000061793C	USBISMAR00006E	USBISMAR00006E		46.19479117206C	-100.7930251328	43.172717907447	0.3
16330.0	16330.0	16330.0	16330.0	959.0	TS400000332554	USBISMAR00006E	USBISMAR00006E		46.917304496977	-99.90136309122	33.934212832947	0.3
16330.0	16330.0	16330.0	16330.0	1071.0	TAF00000388377	USCHARLO00007	USCHARLO00007		35.322108392237	-80.81891584762	6.9411536869639	0.2
16330.0	16330.0	16330.0	16330.0	1634.0	TS400000216856	USCHEVEN00012	USCHEVEN00012		41.038068441347	-105.0876268242	15.384834030442	0.3
16330.0	16330.0	16330.0	16330.0	223.0	TAF00000216848	USDENVER00001	USDENVER00001		39.838287098284	-105.1295943800	9.9618924010636	0.6
16330.0	16330.0	16330.0	16330.0	609.0	NGF0000033647F	USFRESNO00004	USFRESNO00004		36.750625106066	-119.9873226097	11.182278863685	0.3
16330.0	16330.0	16330.0	16330.0	981.0	TGM0000038839J	USJACKSO00007	USJACKSO00007		30.452989266344	-81.74587709911	9.952273838949C	0.5
16330.0	16330.0	16330.0	16330.0	2458.0	NPR00000617933	USLINCOL000205	USLINCOL000205		40.937735056404	-96.86238074395	11.781595102597	0.4
16330.0	16330.0	16330.0	16330.0	916.0	NDS0000044275C	USMADISO00006	USMADISO00006		43.124628589587	-89.17046944633	11.477848092907	0.3
16330.0	16330.0	16330.0	16330.0	916.0	NDS0000044275C	USMADISO00006	USMADISO00006		43.124628589587	-89.17046944633	11.477848092907	0.3
16330.0	16330.0	16330.0	16330.0	574.0	NBD0000044275I	USOLYMPI000041	USOLYMPI000041		47.075999469516	-122.8657382730	2.8121907608923	0.4
16330.0	16330.0	16330.0	16330.0	2412.0	NPR00000556419	USORLAND00020C	USORLAND00020C		28.542740123985	-81.40996917248	2.0019697868686	0.3
16330.0	16330.0	16330.0	16330.0	2089.0	NDC0000033647J	USPHOENI00017A	USPHOENI00017A		33.388522833782	-111.9636212472	7.6723549242824	0.5
16330.0	16330.0	16330.0	16330.0	2015.0	NDS0000061793E	USPIERRE000166F	USPIERRE000166F		44.116495764642	-100.1089269305	21.136295038319	0.7
16330.0	16330.0	16330.0	16330.0	1855.0	NDC0000011360J	USPITTSB000152I	USPITTSB000152I		40.733206736001	-80.03465906736	20.467136135922	0.4
16330.0	16330.0	16330.0	16330.0	1469.0	TAF00000216851	USPORTLA00011C	USPORTLA00011C		45.382710299547	-122.6580489545	8.9592207312232	0.4
16330.0	16330.0	16330.0	16330.0	952.0	NGF0000055642Z	USRICHMO00006	USRICHMO00006		37.426142363464	-77.57760475136	11.177903666254	0.3
16330.0	16330.0	16330.0	16330.0	2204.0	TAF0000038839Z	USSANANT00018	USSANANT00018		29.459928398971	-98.57994161908	5.6854701537463	0.4
16330.0	16330.0	16330.0	16330.0	1864.0	NDC0000061793A	USST.LOU000153	USST	LOU000153260	38.529189903712	-89.82912683495	21.132796337465	0.4
16330.0	16330.0	16330.0	16330.0	2389.0	TS400000332546	USSTPAUL000199	USSTPAUL000199		44.58198866630C	-92.87507821517	27.196306752446	0.2
16330.0	16330.0	16330.0	16330.0	1688.0	NDS00000556421	USWASHIN00013	USWASHIN00013		38.75832809766E	-76.97449731782	9.6332232968073	0.4

VISUAL ANALYTICS 8.1

Meny för hantering av kolumner

SAS® Visual Data Builder

INSIGHT_TOY_DEMO

Search

Carl-Olof Magnusson

TransactionDate	TransactionYear	TransactionMo...	TransactionWe...	SalesRepID	Order	Customer	LEFT_Customer	RIGHT_Custom...	CustomerLat	CustomerLon	CustomerDista...	Cl
16330.0	16330.0	16330.0	16330.0	178.0	TSA0000							
16330.0	16330.0	16330.0	16330.0	2085.0	TSA0000							
16330.0	16330.0	16330.0	16330.0	1072.0	TSA0000							
16330.0	16330.0	16330.0	16330.0	150.0	NBD000							
16330.0	16330.0	16330.0	16330.0	150.0	NDS0000							
16330.0	16330.0	16330.0	16330.0	150.0	NDS0000							
16330.0	16330.0	16330.0	16330.0	2372.0	TSA0000							
16330.0	16330.0	16330.0	16330.0	959.0	NDS0000							
16330.0	16330.0	16330.0	16330.0	959.0	TSA0000							
16330.0	16330.0	16330.0	16330.0	1071.0	TAF0000							
16330.0	16330.0	16330.0	16330.0	1634.0	TSA00000216856	USCHEYEN00012	USCHEYEN00012		41.038068441347	-105.0876268242	15.3848340304442	0.3
16330.0	16330.0	16330.0	16330.0	223.0	TAF00000216848	USDENVER00001	USDENVER00001		39.838287098284	-105.1295938000	9.9618924010636	0.6
16330.0	16330.0	16330.0	16330.0	609.0	NGF00000336475	USFRESNO00004	USFRESNO00004		36.750625106066	-119.9873226097	11.18227886368E	0.3
16330.0	16330.0	16330.0	16330.0	981.0	TGM00000388394	USJACKSO00007	USJACKSO00007		30.452989266344	-81.74587709911	9.95227388949C	0.5
16330.0	16330.0	16330.0	16330.0	2458.0	NPR00000617933	USLINCLO000205	USLINCLO000205		40.937735056404	-96.86238074395	11.781595102597	0.4
16330.0	16330.0	16330.0	16330.0	916.0	NDS00000442754	USMADISO00006	USMADISO00006		43.124628589587	-89.17046944633	11.477848092907	0.3
16330.0	16330.0	16330.0	16330.0	916.0	NDS00000442754	USMADISO00006	USMADISO00006		43.124628589587	-89.17046944633	11.477848092907	0.3
16330.0	16330.0	16330.0	16330.0	574.0	NBD00000442756	USOLYMPI000041	USOLYMPI000041		47.075999469516	-122.8657382730	2.8121907608923	0.4
16330.0	16330.0	16330.0	16330.0	2412.0	NPR00000556419	USORLAND000020	USORLAND000020		28.542740123985	-81.40996917248	2.001969786868E	0.3
16330.0	16330.0	16330.0	16330.0	2089.0	NDC00000336477	USPHOENI000174	USPHOENI000174		33.388522833782	-111.9636212472	7.6723549242824	0.5
16330.0	16330.0	16330.0	16330.0	2015.0	NDS00000617935	USPIERRE000166	USPIERRE000166		44.116495764642	-100.1089269305	21.136295038315	0.7
16330.0	16330.0	16330.0	16330.0	1855.0	NDC0000011360	USPITTSB000152	USPITTSB000152		40.733206736001	-80.03465906736	20.467136135922	0.4
16330.0	16330.0	16330.0	16330.0	1469.0	TAF00000216851	USPORTLA00011C	USPORTLA00011C		45.382710299547	-122.6580489545	8.9592207312232	0.4
16330.0	16330.0	16330.0	16330.0	952.0	NGF00000556422	USRICHMO00006	USRICHMO00006		37.426142363464	-77.57760475136	11.177903666254	0.3
16330.0	16330.0	16330.0	16330.0	2204.0	TAF00000388392	USSANANT00018	USSANANT00018		29.459928398971	-98.57994161908	5.6854701537463	0.4
16330.0	16330.0	16330.0	16330.0	1864.0	NDC00000617934	USSTLOU000153	USST	LOU000153260	38.529189903712	-89.82912683495	21.13279633746E	0.4
16330.0	16330.0	16330.0	16330.0	2389.0	TSA00000332546	USSTPAUL000199	USSTPAUL000199		44.58198866630C	-92.87507821517	27.19630675244E	0.2
16330.0	16330.0	16330.0	16330.0	1688.0	NDS00000556421	USWASHIN00013	USWASHIN00013		38.75832809676E	-76.97449731782	9.6332232968073	0.4

Remove
Rename
Change case
White space operations
Concatenate...
Split...
Quick split
Transpose...
Filter...
Remove filter

VISUAL ANALYTICS 8.1

Ny dialog för att beräkna ny värden...

The screenshot shows the 'Calculated Column' dialog in SAS Visual Data Builder. The dialog is titled 'Calculated Column' and has a 'Name' field containing 'Sales Diff'. The 'Format' is set to 'Comma'. The 'Visual' radio button is selected, and the 'Numeric' format dropdown is visible. The formula field contains the expression: $(\text{ProductPriceActual} - \text{ProductPriceTarget})$. On the left, there is a 'Data Items' list with a search bar and a scrollable list of items including FacilityCountryLat, FacilityCountryLon, FacilityEfficiency, FacilityEmployees, FacilityLat, FacilityLon, FacilityOpeningDate, FacilityRegionLat, FacilityRegionLon, ProductCostOfSale, ProductMaterialCost, ProductPriceActual, ProductPriceTarget, and ProductQuality. At the bottom right, there are 'Accept', 'Preview', and 'Cancel' buttons. The background shows a data table with columns for 'Transaction' and 'Sales Diff'.

VISUAL ANALYTICS 8.1

Och man ser resultatet direkt...

The screenshot shows the SAS Visual Data Builder interface. At the top, there's a navigation bar with 'SAS Visual Data Builder', a search bar, and the user name 'Carl-Olof Magnusson'. Below the navigation bar, there's a dropdown menu for 'INSIGHT_TOY_DEMO'. The main area displays a data table with 12 columns. The 'Sales Diff' column is highlighted with a red box. The table contains 30 rows of data, including product information like 'Primate (m)', 'Elephant (l)', 'Elephant (s)', 'Plastic Bead (l)', 'Ball (m)', 'Elephant (l)', 'Movie Star', 'Dog (s)', 'Bar Mitzvah', 'Card Game', 'Container (m)', 'Clip (m)', 'Plastic Bead (m)', 'Container (l)', 'Frame (3x5)', 'Clip (m)', 'Clip (l)', 'Movie Star', 'Bar Mitzvah', 'Super Hero', 'Ball (l)', and 'Inflatable (s)'. Each row contains numerical values for various attributes, with the 'Sales Diff' column showing values ranging from -5.535847843559 to -3.739948336988.

ProductMake	ProductStyle	ProductPriceTa...	ProductPriceAc...	ProductMateria...	ProductCostOf...	ProductQuality	SalesRep	SalesRepCusto...	SalesRepRating	SalesRepCusto...	Sales Diff
Primate (m)	Gibbon	33.771474322881	30.031525985893	4.2214342903602	20.661599306941	0.7992571789661	MXTJUAN000176	91.0	0.1900828985462	1297000.0	-3.739948336988
Elephant (l)	African	67.542948645763	67.542948645763	6.7542948645763	38.557583381894	0.9009528701853	NOOSLCO_002085	90.0	0.3284447857739	1020000.0	0.0
Elephant (s)	African	13.508589729152	13.508589729152	1.688573716144C	10.780879713633	0.9014806221282	PELIMA..001072	564.0	1.0	8003000.0	0.0
Plastic Bead (l)	Green 8mm	27.017179458305	25.600020812998	2.7017179458305	24.194838762372	0.8575460179885	USALBUQU000015	45.0	0.1213240515082	487000.0	-1.417158645307
Ball (m)	Green	5.0657211484322	4.9301361707737	0.844286858072C	4.5970538789642	0.8832348122437	USALBUQU000015	45.0	0.1213240515082	487000.0	-0.135584977658
Ball (m)	Green	5.0657211484322	4.4622553921947	0.844286858072C	4.1646735562055	0.7908726855357	USALBUQU000015	45.0	0.1213240515082	487000.0	-0.603465756237
Elephant (l)	Asian	67.542948645763	62.420298737155	6.7542948645763	35.94809145218C	0.8341571472475	USBALTIMO02372	47.0	0.1848087730699	639000.0	-5.122649908607
Ball (m)	White	5.0657211484322	5.0657211484322	0.844286858072C	4.7231338971961	0.907477010711C	USBISAR000095	9.0	0.2530644834041	58000.0	0.0
Elephant (s)	African	13.508589729152	13.268149025313	1.688573716144C	10.12956454948	0.8922009026355	USBISAR000095	9.0	0.2530644834041	58000.0	-0.240440703839
Movie Star	Female	27.017179458305	25.512874952198	4.2214342903602	23.127809019424	0.8543204458693	USCHARLO00107	45.0	0.1259839678831	616000.0	-1.504304506107
Dog (s)	Shih Tzus	13.508589729152	12.758055110725	1.688573716144C	10.063951352373	0.8544401944635	USCBEVEN00163	9.0	0.2195236649844	55000.0	-0.750534618423
Movie Star	Male	27.017179458305	25.536424653555	4.2214342903602	23.13233724137	0.8551921024161	USDENVER00022	45.0	0.5990082919197	573000.0	-1.480754804750
Bar Mitzvah	Parent	27.017179458305	24.823797465114	6.7542948645763	22.479324546942	0.8288152857855	USFRESNO000060	36.0	0.1959472342468	454000.0	-2.193381993191
Card Game	Buzzle	13.508589729152	12.270519638046	2.5328605742161	10.813565081925	0.8183494194487	USJACKSO00098	49.0	0.5629949867725	770000.0	-1.238070091105
Container (m)	Orange Solid	40.52576918745E	37.742979356787	5.9100080065043	35.198421294446	0.8413328312705	USLINCOL002458	18.0	0.2582298329586	238000.0	-2.782789830670
Clip (m)	Gold	5.0657211484322	4.962167479968E	0.844286858072C	4.7336098211937	0.889557961161C	USMADISO00091	16.0	0.1987612031075	218000.0	-0.103553668463
Clip (m)	Gold	5.0657211484322	5.0657211484322	0.844286858072C	4.8988305728617	0.9235897307943	USMADISO00091	16.0	0.1987612031075	218000.0	0.0
Plastic Bead (m)	Gold 6mm	20.262884593725	18.587465075614	2.0262884593725	17.48256632278E	0.8273158436365	USOLYMPI000574	3.0	0.3942937552928	44000.0	-1.675419518114
Container (l)	Purple Solid	60.788653781187	58.44845362848C	10.131442296864	53.44435931158E	0.8715026817153	USORLAND00241	16.0	0.2043409369975	206000.0	-2.340200152706
Frame (3x5)	Orange	16.88573716144C	16.88573716144C	4.2214342903602	15.012019186204	0.9260450943545	USPHOENI00208	65.0	0.4658314883708	1371000.0	0.0
Clip (m)	Yellow	5.0657211484322	5.0657211484322	0.844286858072C	4.9162894485667	0.9207024000956	USPIERRE02015	5.0	0.6940295398235	14000.0	0.0
Clip (l)	Yellow	6.7542948645763	5.833586782924E	1.182001601300E	5.616708310174C	0.7736855363717	USPITTSB001855	24.0	0.4291908457495	323000.0	-0.920708081651
Movie Star	Female	27.017179458305	25.188080718697	4.2214342903602	23.81478666214C	0.8422986789782	USPORTLA00146	30.0	0.3956519961357	551000.0	-1.829098739608
Bar Mitzvah	Zayde	27.017179458305	23.37291173242C	6.7542948645763	21.16835446441E	0.7751129466897	USRICHMO00095	17.0	0.1917709825152	200000.0	-3.644267725884
Super Hero	Robin	27.017179458305	26.364855101471	4.2214342903602	24.016190782541	0.8858552013972	USSANANT00220	36.0	0.318782210350C	1217000.0	-0.652324356834
Ball (l)	Red	6.7542948645763	6.7542948645763	1.1144586526551	5.9541183610851	0.9095065556838	USSTLOUO001864	21.0	0.3899608816732	336000.0	0.0
Horse (l)	American Quarter	67.542948645763	62.007100802204	6.7542948645763	35.595480556053	0.8280395888164	USSTPAUL002389	23.0	0.1432517832063	286000.0	-5.535847843559
Inflatable (s)	Red/White Beach	3.3771474322881	3.105502930447E	0.5065721148432	2.9222541290833	0.829563919761E	USWASHIN00168	48.0	0.3424700855636	583000.0	-0.271644501840

VISUAL ANALYTICS 8.1

Planfil (data query) som kan sparas och schemaläggas...

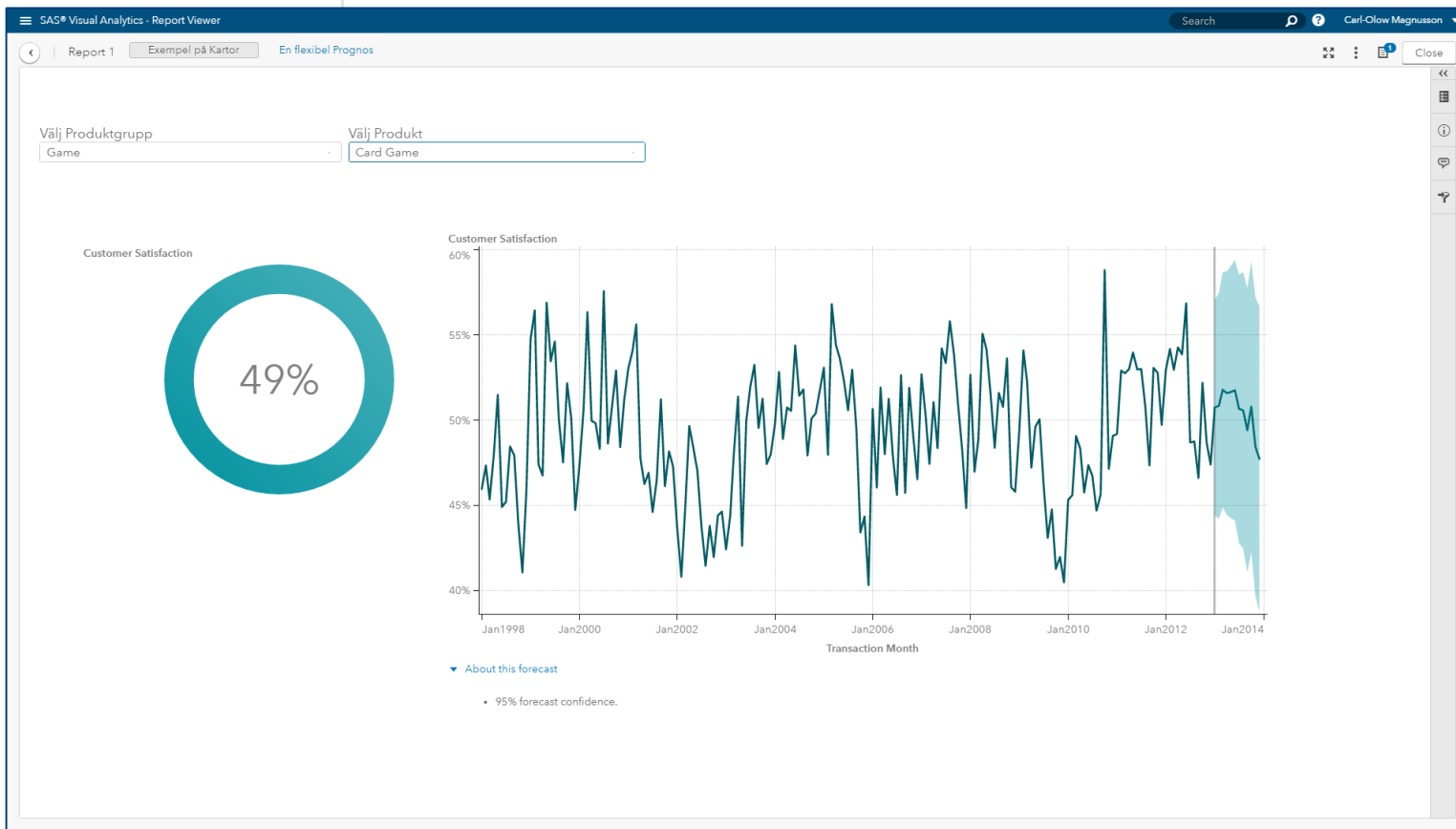
The screenshot displays the SAS Visual Analytics 8.1 interface. On the left, a data table titled 'INSIGHT_TOY_DEMO' is shown with columns for ProductMake, ProductStyle, ProductPriceTa..., ProductPriceAc..., ProductMateria..., ProductCostOf..., ProductQuality, SalesRep, SalesRepCusto..., SalesRepRating, and Sales. The table contains 30 rows of data.

On the right, a 'Plan' editor is visible, showing a list of tables and columns. The 'Add calculate...' button is highlighted. The plan editor shows the following structure:

- Input table: INSIGHT_TOY_DEMO
- Output table: INSIGHT_TOY_DEMO
- expression: ProductPriceActual - ProductF
- Output column: Sales Diff
- inColumns: inColumns
- format: ["ProductPriceActual", "Produc
- comma

VISUAL ANALYTICS 8.1

Dashboards + Avancerad Analys = Sant

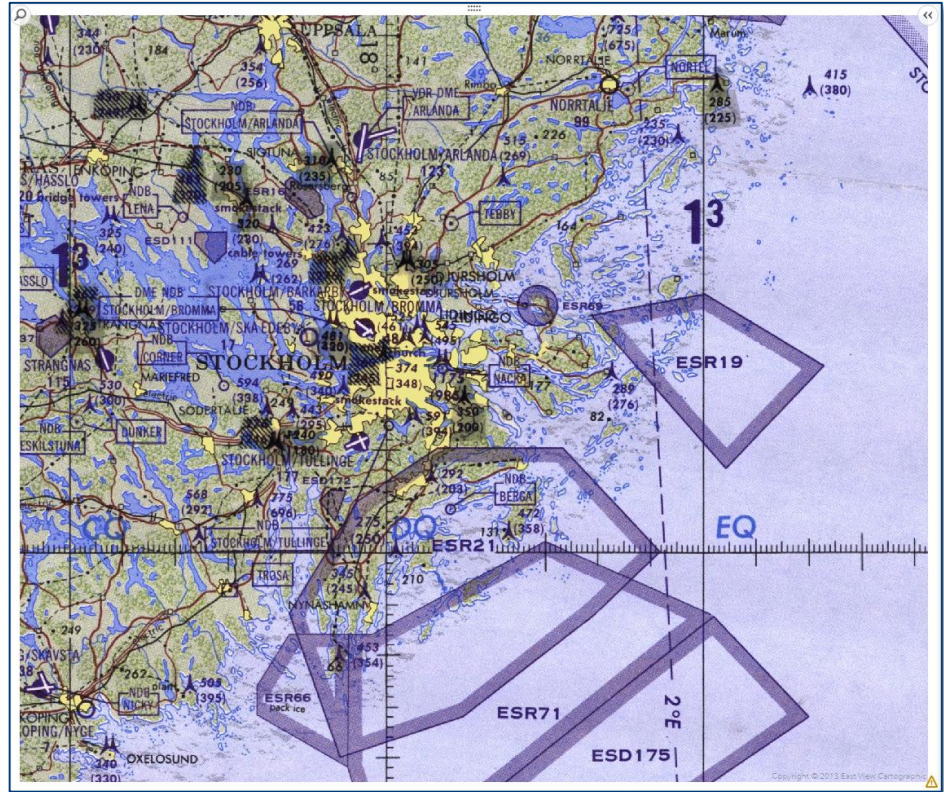
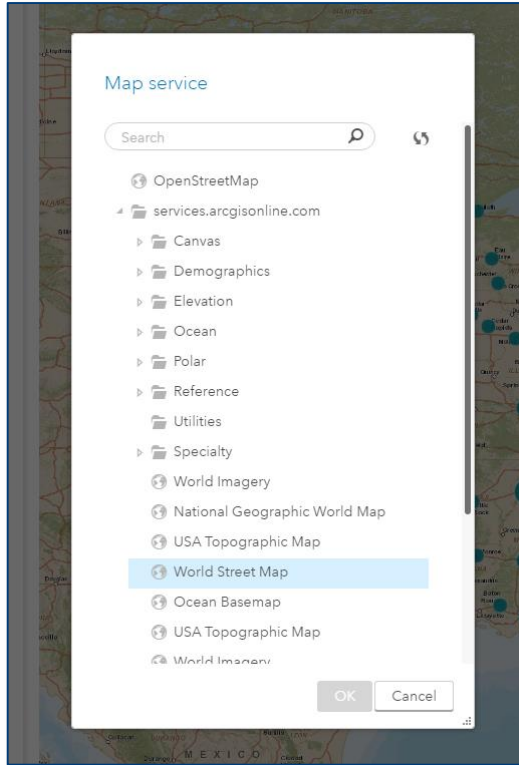


VISUAL ANALYTICS 8.1



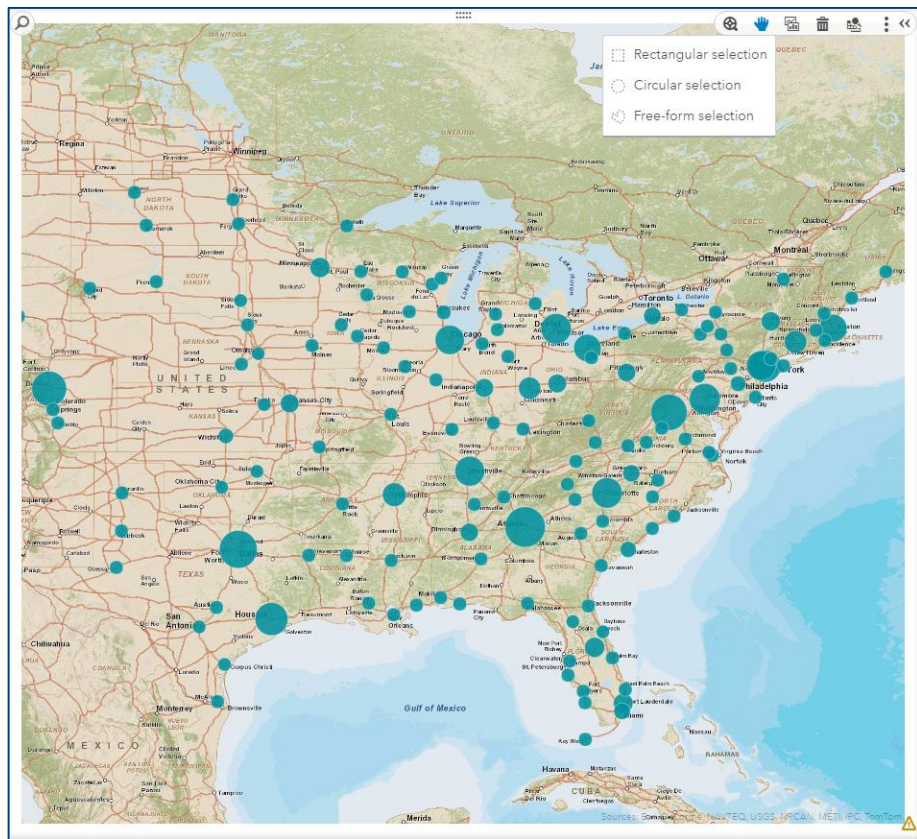
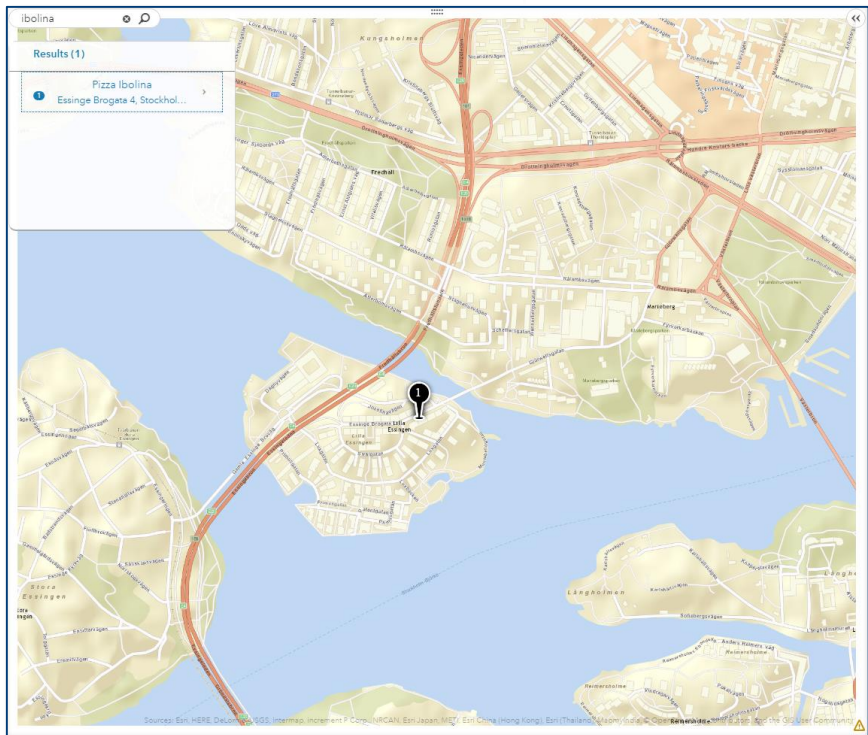
VISUAL ANALYTICS 8.1

Ett gäng med nya kartor...



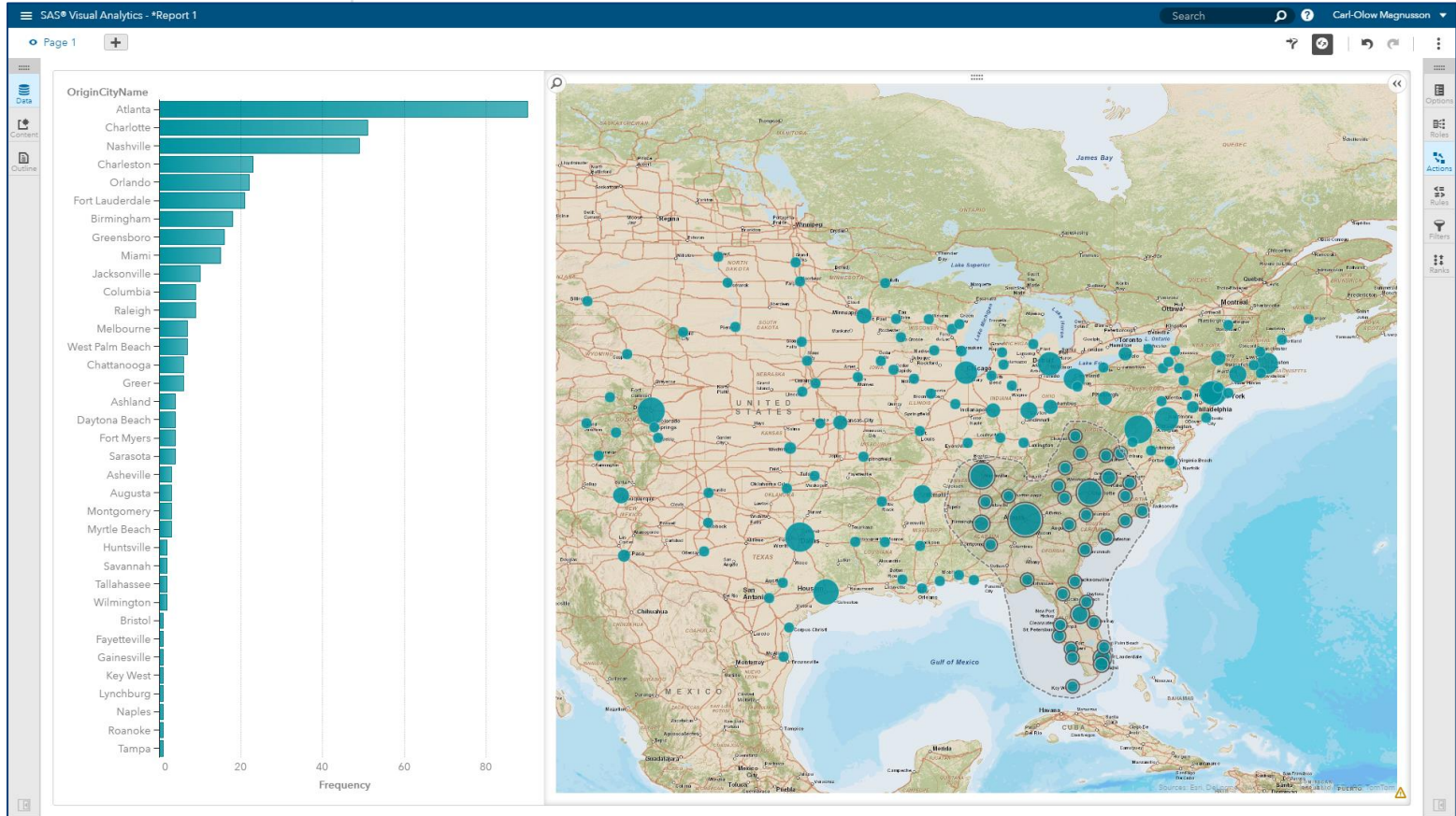
VISUAL ANALYTICS 8.1

Nya inbyggda funktioner...



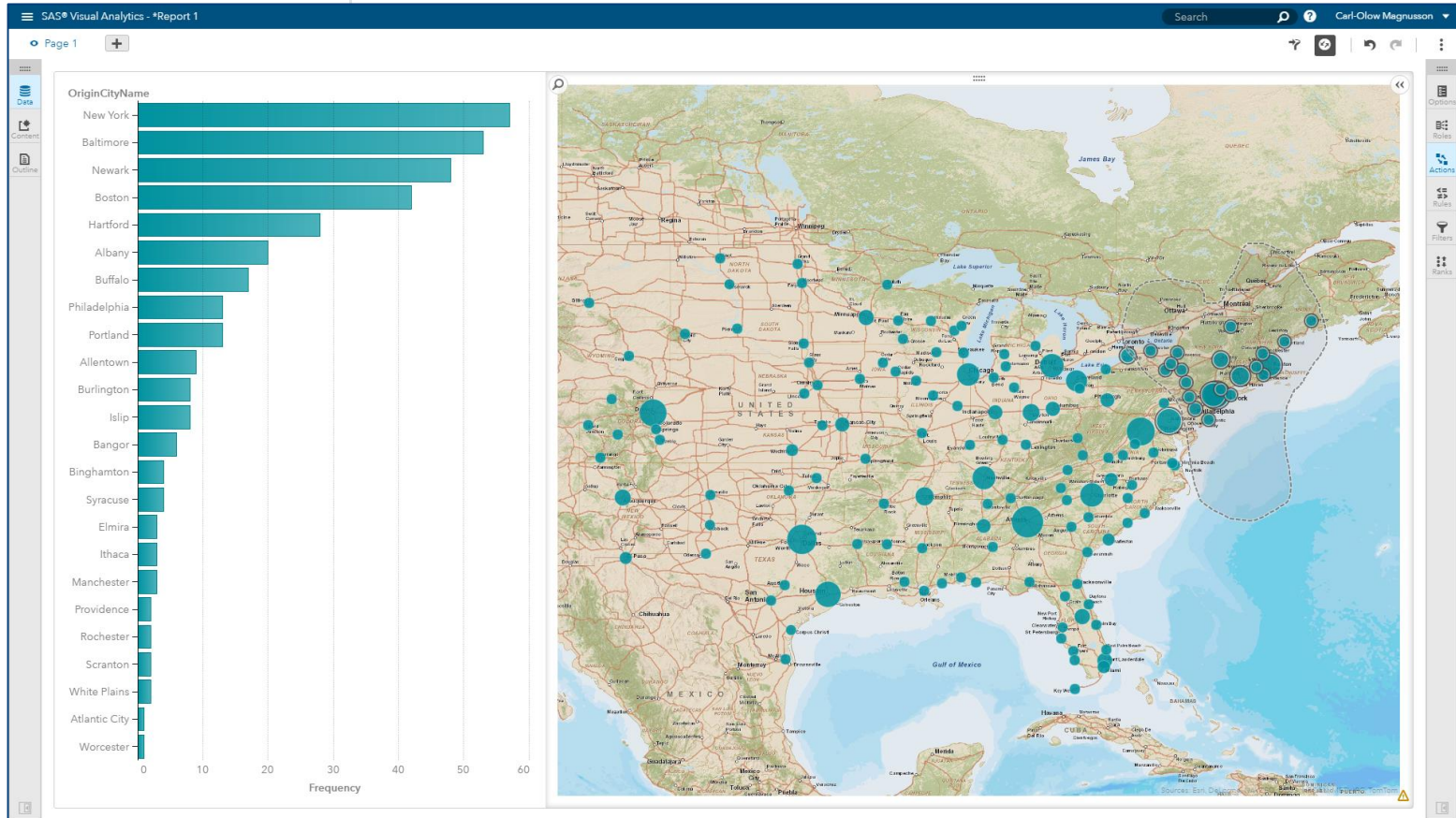
VISUAL ANALYTICS 8.1

Ett exempel där jag markerar ett "fritt" område för att filtrera...



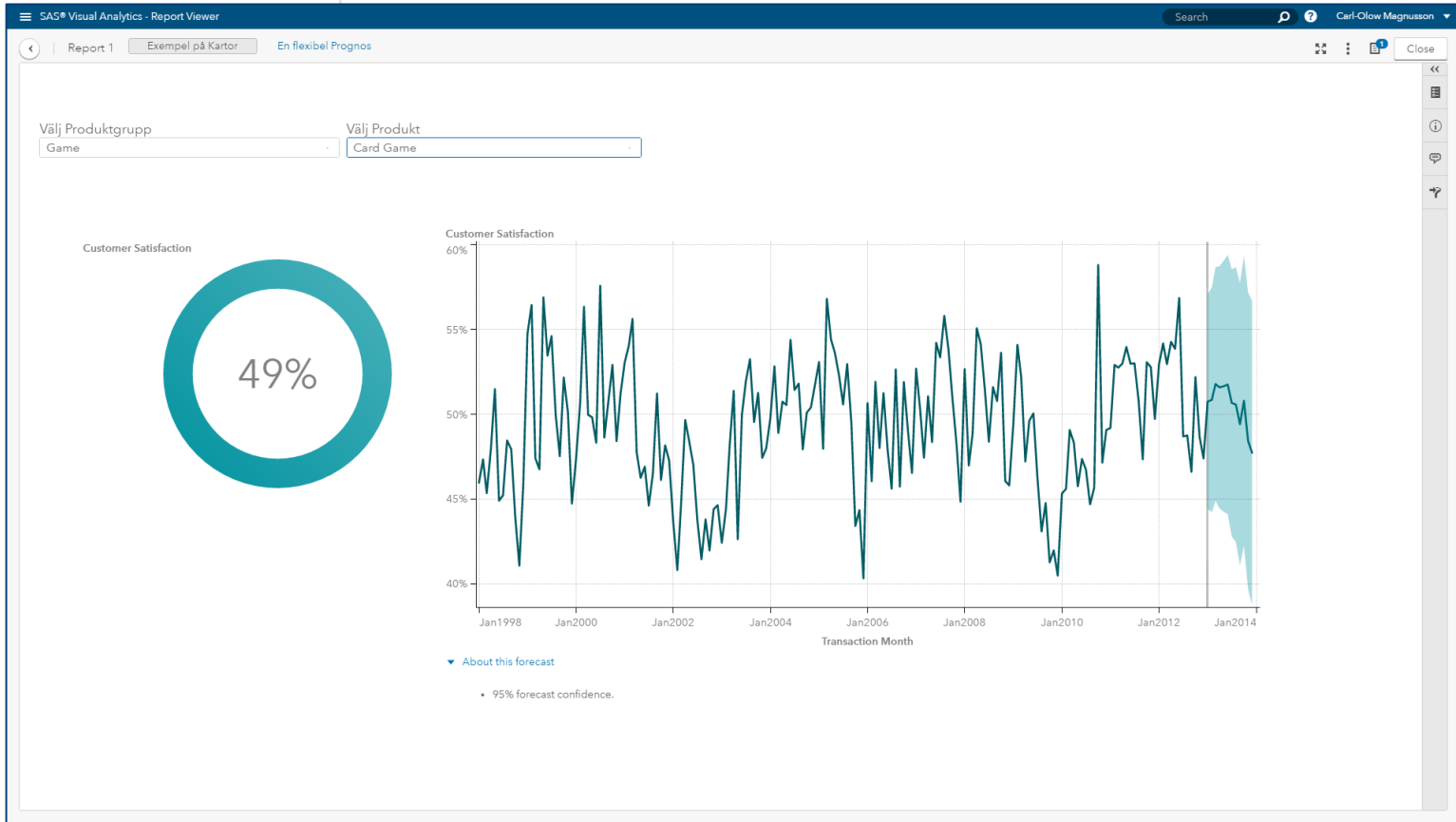
VISUAL ANALYTICS 8.1

... och jag kan även flytta mitt område ☺



VISUAL ANALYTICS 8.1

Dashboards + Avancerad Analys = Sant



VISUAL ANALYTICS 8.1

Dashboards + Avancerad Analys = Sant

