

Successes in Real Estate Data-Driven Decision Making

January 23, 2013

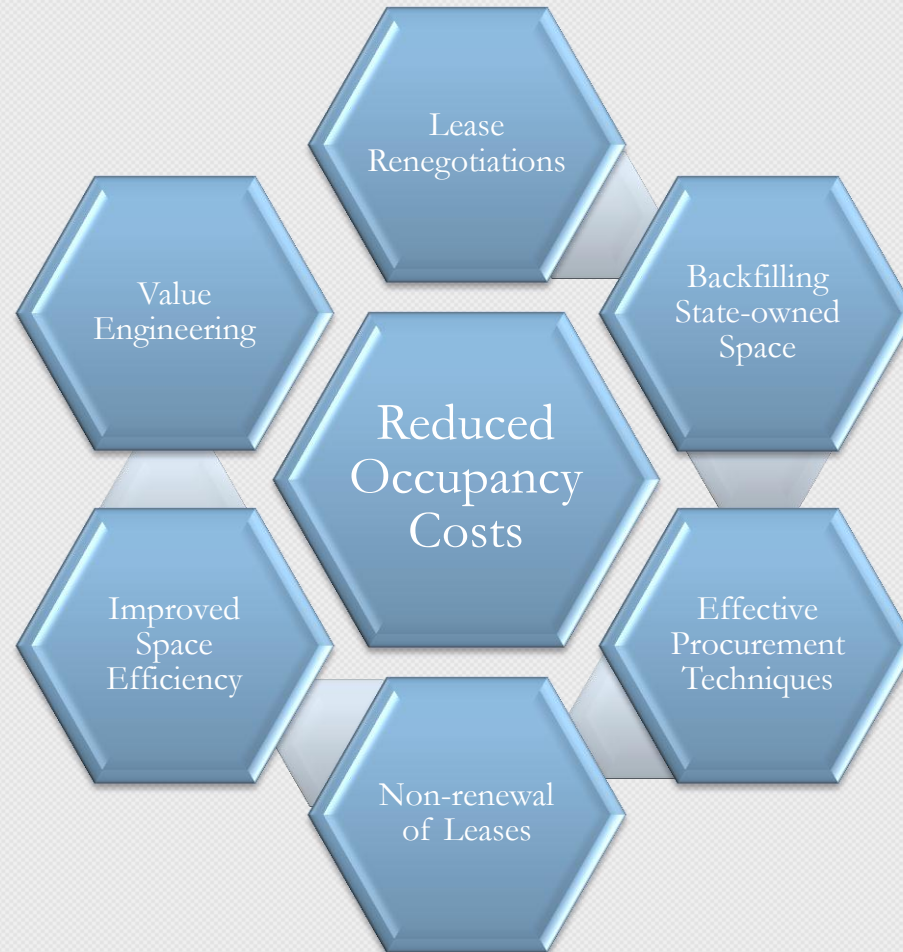
Mike Griffin

Jess Joaquin Johnson

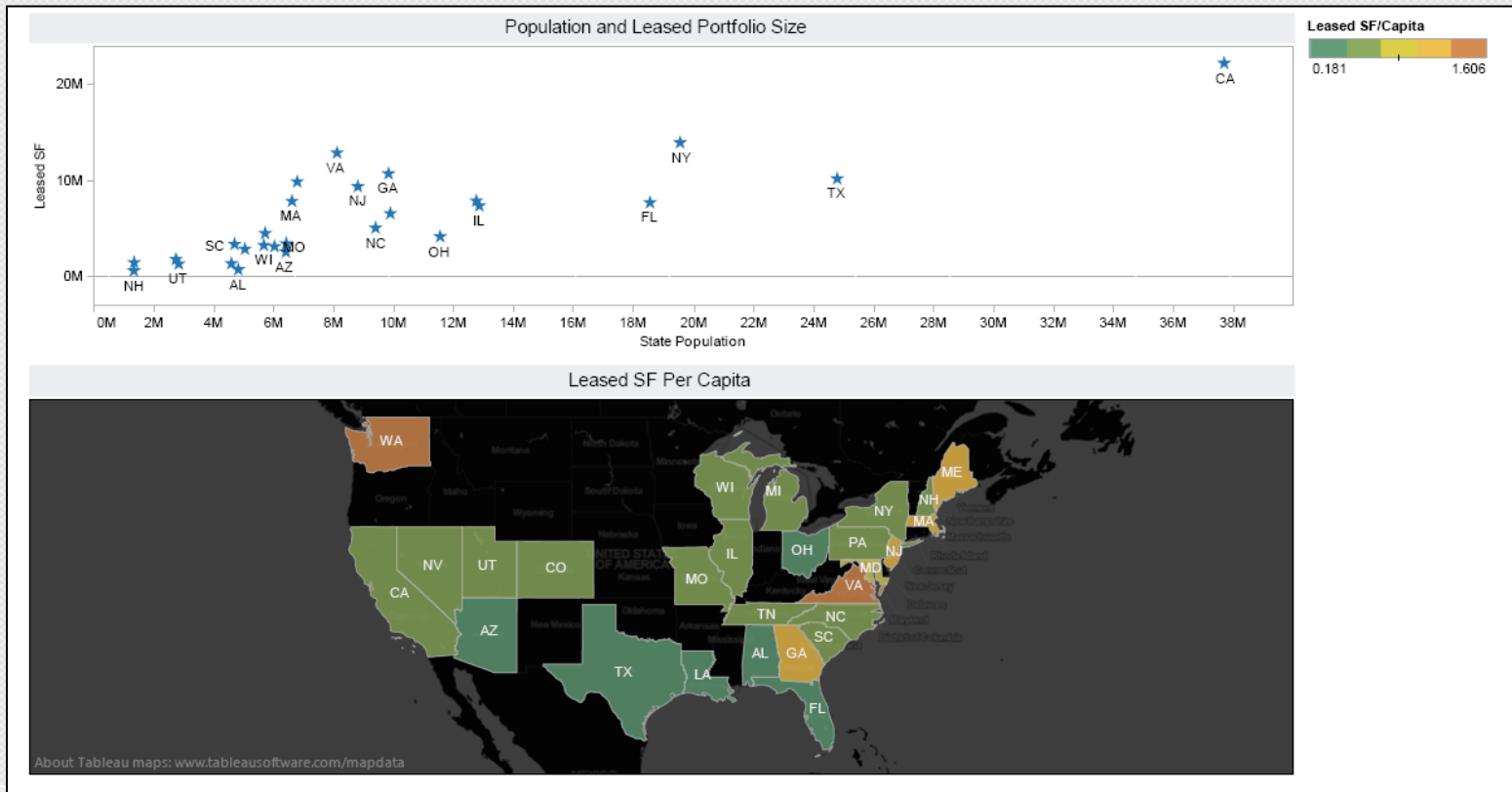
Jerry Thornbury



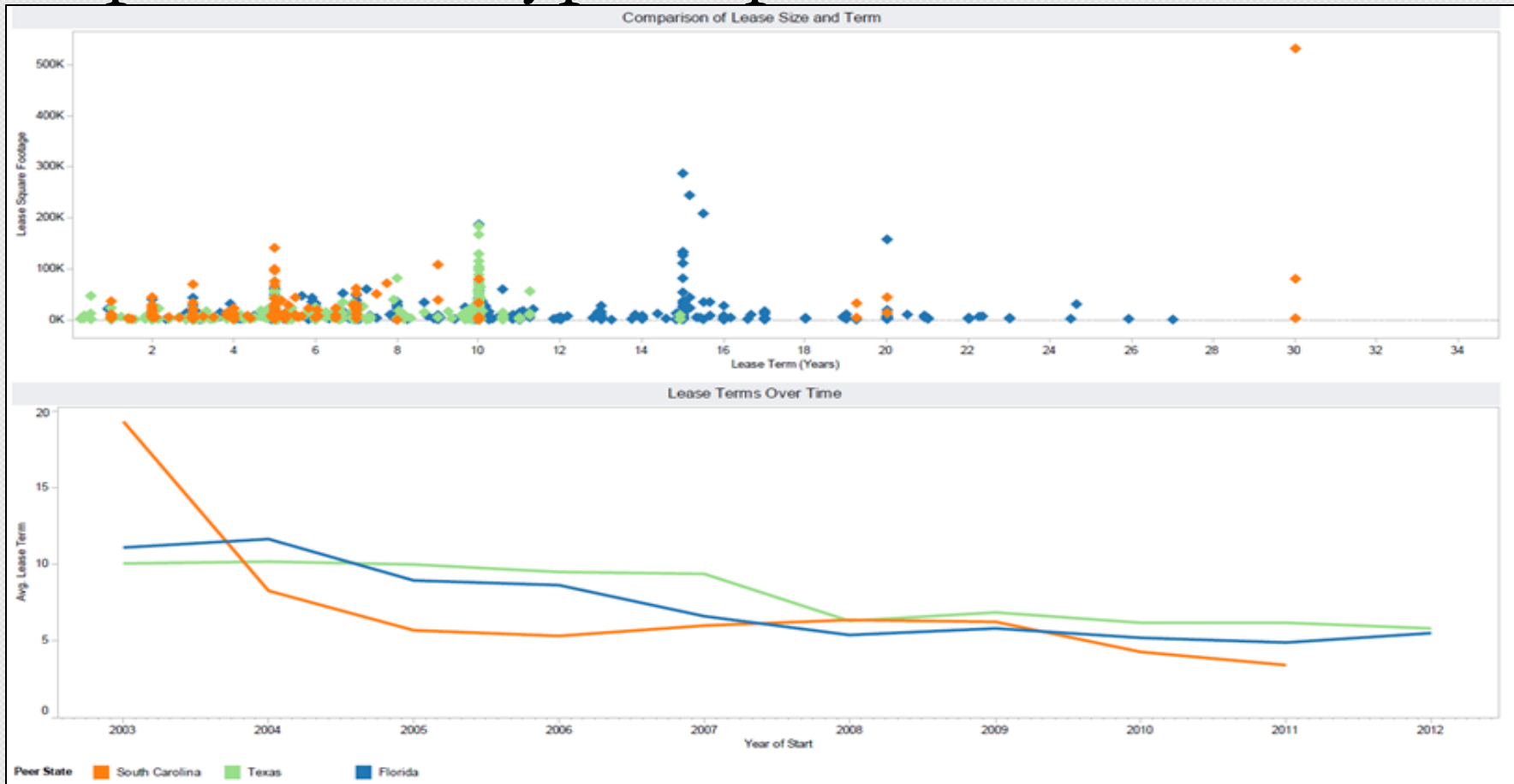
In Florida, several successful initiatives are driven by data



Florida is near the front of the pack in efficiently providing leased facilities for the agencies that serve its citizens



Market data and state budgets have impacted the typical private lease term



Based on recent survey data, what are other states doing to reduce occupancy costs?

- More than 2/3rd of states are implementing cost reduction strategies
- More than 2/3rd of states are utilizing or investing to improve technology platforms
- More than half of states are evaluating revenue-generating opportunities for its owned facilities
- More than 20% of states are focusing on implementing Public Private Partnerships (P3s)

What do real estate and baseball have in common?



Data-driven strategies to real estate challenges

The problem	The data-driven approach
<ul style="list-style-type: none">• Need to use information from multiple sources to respond to data requests	<ul style="list-style-type: none">• Aggregate and link real estate related data
<ul style="list-style-type: none">• Need to quantify real estate demands	<ul style="list-style-type: none">• Collect and analyze actual occupancy data
<ul style="list-style-type: none">• Need to understand how real estate demands differ among offices, workgroups, people	<ul style="list-style-type: none">• Link occupancy, HR and workplace data
<ul style="list-style-type: none">• Need to identify and get ahead of trends so that the right solutions can be found	<ul style="list-style-type: none">• Apply appropriate statistical tools that unlock the power of your data
<ul style="list-style-type: none">• Need to forecast future real estate needs accurately	<ul style="list-style-type: none">• Use fact-based probabilistic modeling to account for both knowns and unknowns



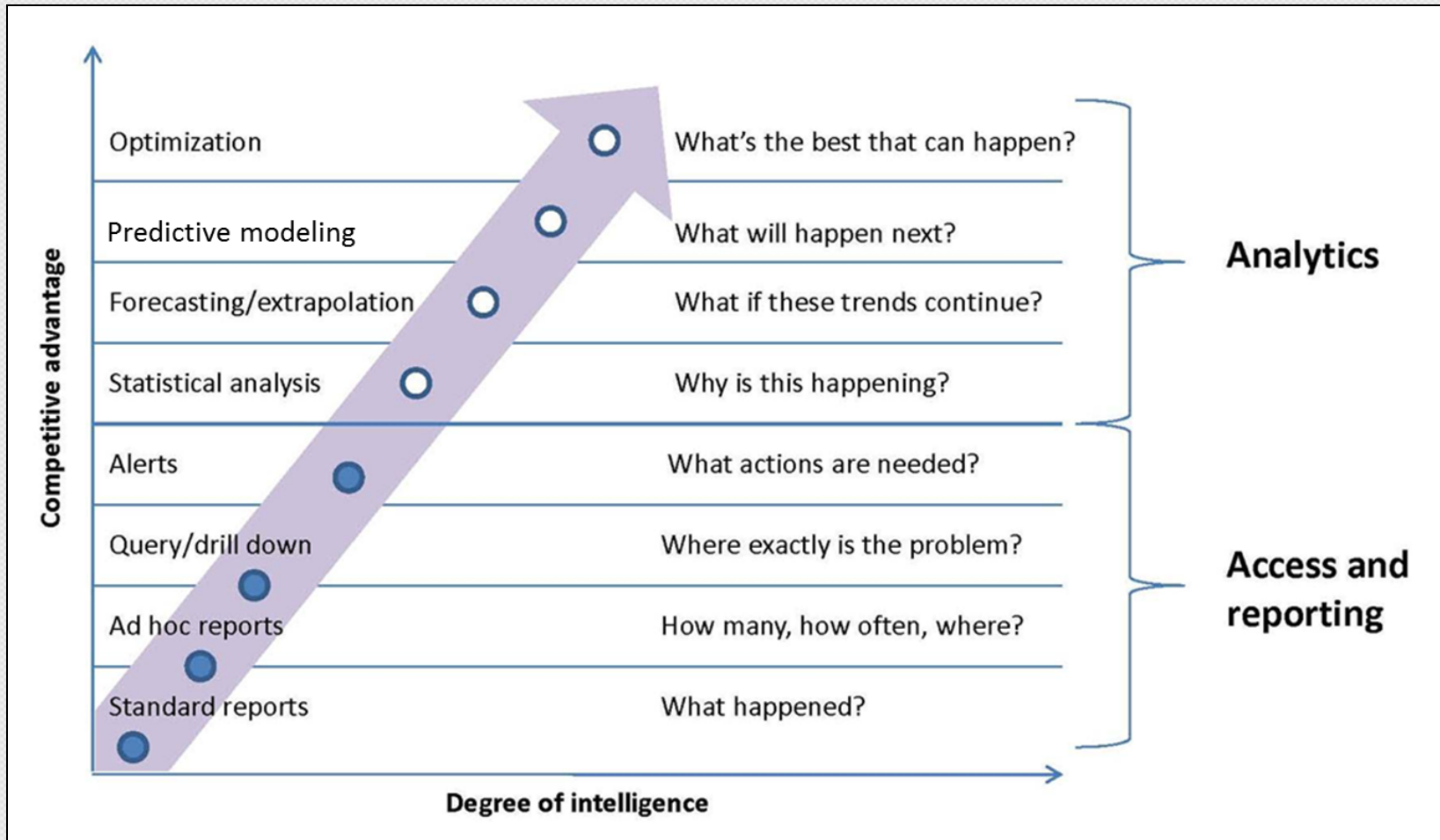
Knowledge integration unlocks the power of your data



How is the portfolio performing?

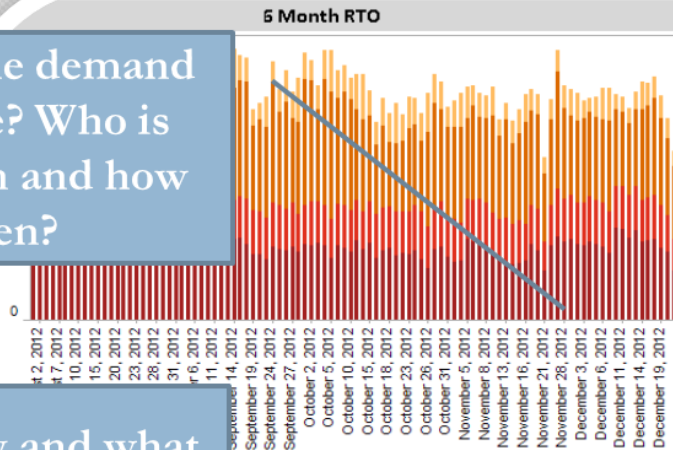
- Space efficiency (SF/FTE)
- Real-time occupancy and workspace utilization
- Adherence to space standards
- Occupancy costs
- Revenue generation

The Business Intelligence Horizon



Pertinent and timely real estate related data can be made accessible on the Web

What is the demand for space? Who is coming in and how often?

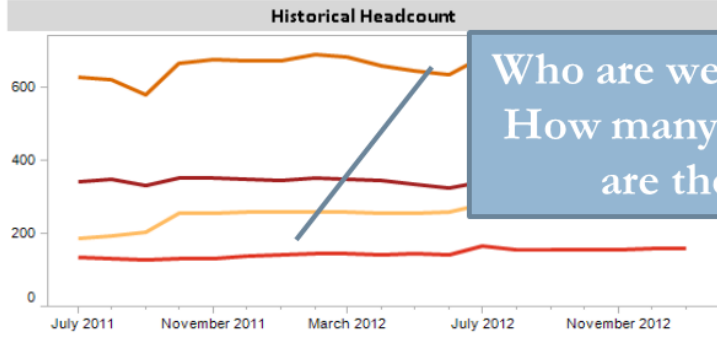


How many and what types of workspaces are available?

Space Type Count Breakdown

Space Type	Assurance	IFS	Tax	Grand Total
Partner Office	22	56	3	37
Director Office	18	32	38	50
Staff Seats	59	85	114	250
Collaborative		6	118	124
Ancillary	1		145	147
Grand Total	100	179	155	1,080

Who are we serving? How many of them are there?



Current Headcount

Staff Type	Assurance	IFS	Tax	Grand Total
Partner Office	32	54	1	121
Director Office	74	79	25	236
Staff Seats	200	553	132	1,123
Grand Total	306	686	158	1,479




How much of our footprint serves each program?

Square Footage Breakdown of Measured Space

Space Type	Assurance	IFS	Tax	Grand Total
Partner Office	3,182	8,116	432	11,730
Director Office	1,591	2,828	3,356	7,775
Staff Seats	2,102	2,938	3,637	8,677
Collaborative		2,485		2,485
Ancillary	89			89
Grand Total	6,964	16,367	7,426	30,757



Occupancy data can be collected in numerous ways

Resource Intensive	Active	Passive
		
Infrared and pressure sensors, Bed checks	Security badge swipes, Kiosk check-in	IP Detection, RFID

Data can be organized to provide insight into straight-forward questions

Utilization Detail Offices

December, 2012

Firmwide	██████████ YTD		██████████ YTD		██████████ YTD		██████████ YTD		Total	Total YTD
How many task seats do I have?	293		366		201		189		1,049	
How much SF do these seats represent?	17,289		36,404		17,566		15,527		86,786	
What % of Total Task Seat SF do my seats represent?	20%		42%		20%		48%		100%	
How much am I paying for my share of task seats?	\$62,208	\$333,375	\$130,986	\$815,421	\$63,205	\$380,170	\$55,869	\$326,946	\$312,267	\$1,855,912
How much am I paying for all other space?	\$77,925	\$426,489	\$164,081	\$1,047,421	\$79,174	\$487,917	\$69,985	\$419,314	\$391,166	\$2,381,141
How much am I paying for my total share of the office?	\$140,133	\$759,864	\$295,067	\$1,862,843	\$142,379	\$868,087	\$125,855	\$746,260	\$703,433	\$4,237,053
What % of my task seats were used this month?	30%	33%	51%	58%	35%	41%	58%	71%	44%	51%
How many Partners and Staff came to the office on average each day?	87	81	188							
How many task seats would we need if we targeted 85% utilization?	102	95	222							
Approx how much SF does the difference between the seats we have and the seats we need at 85% represent?	20,995	37,936	26,764							
Approx how much do these excess Task Seats cost?	\$116,049	\$125,359	\$81,484							

Firmwide

	██████████ YTD	
How many task seats do I have?	293	
How much SF do these seats represent?	17,289	
What % of Total Task Seat SF do my seats represent?	20%	
How much am I paying for my share of task seats?	\$62,208	\$333,375
How much am I paying for all other space?	\$77,925	\$426,489
How much am I paying for my total share of the office?	\$140,133	\$759,864
What % of my task seats were used this month?	30%	33%
How many Partners and Staff came to the office on average each day?	87	81
How many task seats would we need if we targeted 85% utilization?	102	95
Approx how much SF does the difference between the seats we have and the seats we need at 85% represent?	20,995	37,936
Approx how much do these excess Task Seats cost?	\$116,049	\$125,359

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Analyzing space allocations may reveal further efficiency opportunities

Building Space Summary

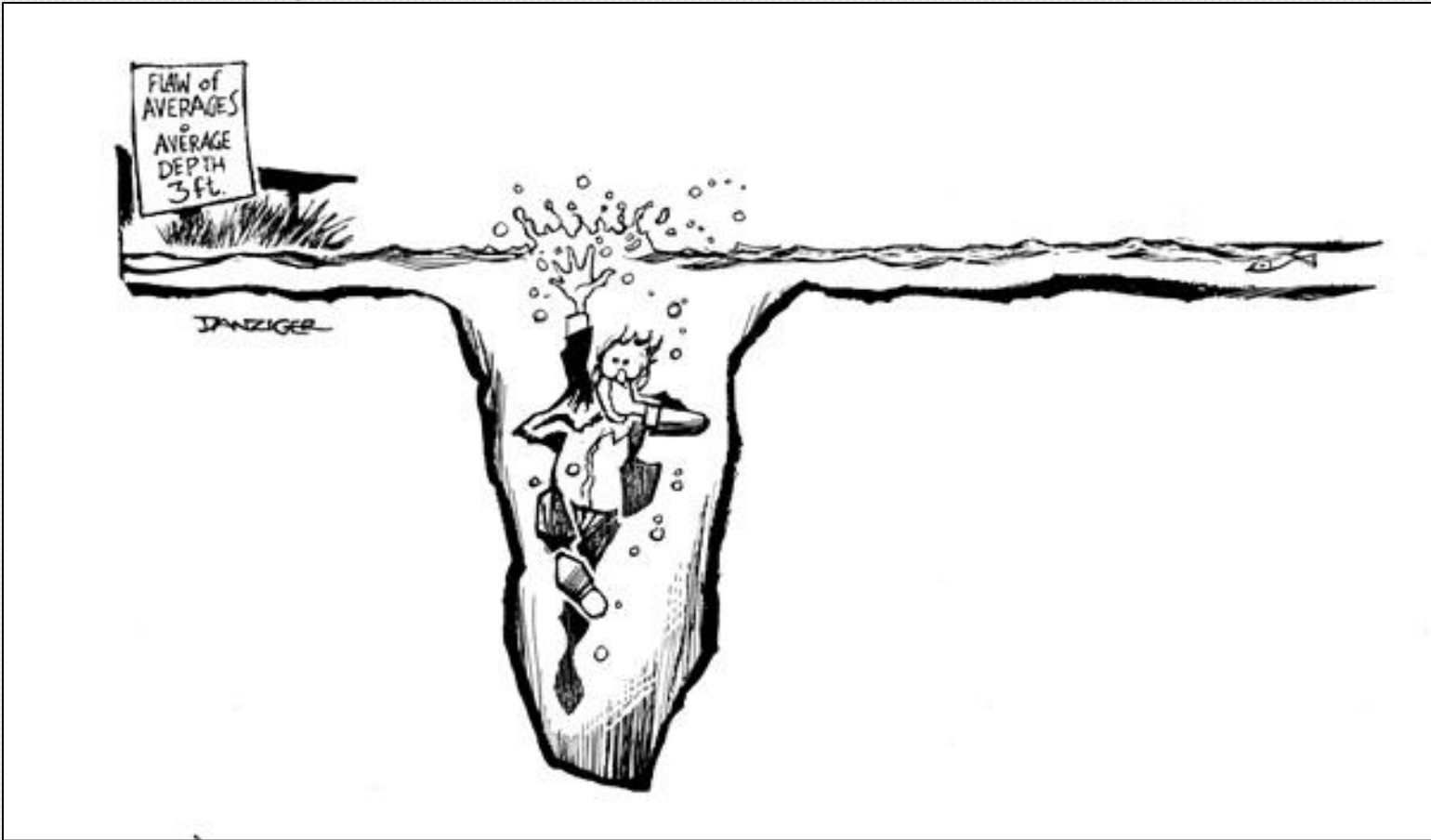
Space Type Breakdown - Measured Spaces

Space Type (group)	Shared	Department				Grand Total
		Dept #1	Dept #2	Dept #3	Dept #4	
Executive Office		126	3,126		1,422	4,774
Enclosed Office		252	4,252	1,183	2,235	7,922
Workstation	125	285	4,325	2,022	2,739	9,516
Collaborative	8,611		1,004		146	9,761
Other	10,981		198	391	859	12,429
Grand Total	19,717	663	12,905	3,595	7,402	44,281

Space Type Totals

Measured Space SF	44,281
Circulation/Gross Up	32,096
Total Rentable SF	76,377

Quick averages are helpful but can be misleading



Monte Carlo analysis

- **Monte Carlo analysis can enable fact-based forecasts that account for uncertainty, quantify risk and allow for evaluation of probabilities**
- **Monte Carlo was developed 65 years ago by particle physicists during development of the Manhattan Project**
 - They knew on average how far radiation penetrated lead shielding
 - They knew on average how much energy would be released when radiation collided with lead particles
 - But, for any given amount of radiation the actual outcome of these two factors was always different
 - They discovered they could accurately model observed results by building uncertainty into the model, running it thousands of times and aggregating the results

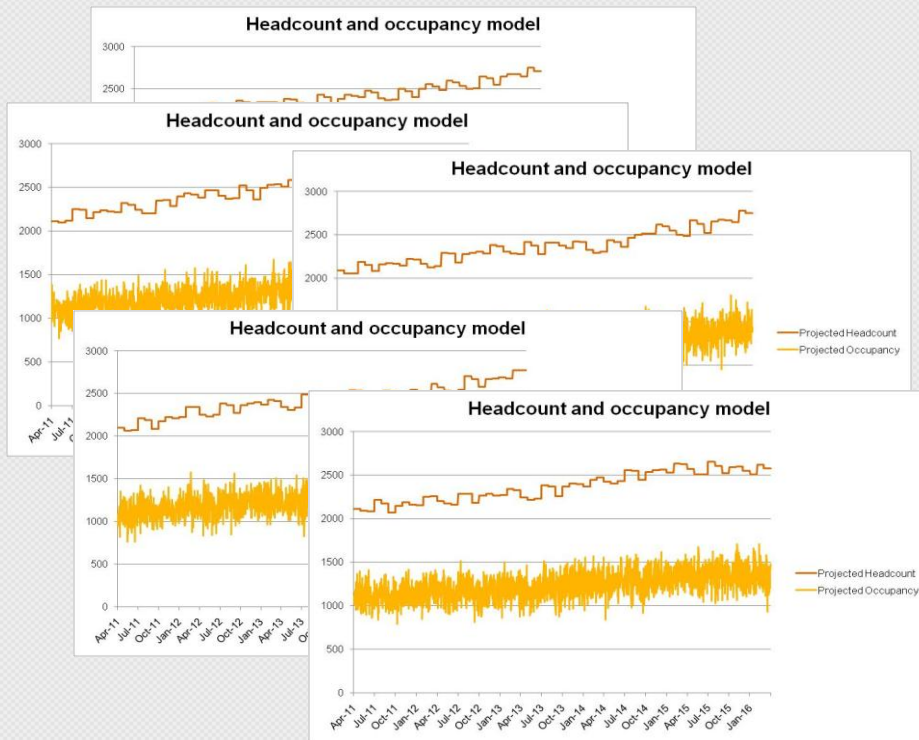
Monte Carlo analysis

- Monte Carlo methods have been widely used in many fields with a variety of applications...
- Finance
- Business
- Disaster recovery
- Biology
- Electrical engineering
- Sports
- Gaming

Considering the many factors that impact future space needs

- Headcount and Attendance
 - Growth projections/trends
 - Mobility
 - Seasonal variation
 - Dynamic work patterns
 - Reorganizations
 - Technology
 - Volatility
 - Uncertainty
- Workplace
 - Changing standards
 - New ways of working (NewWOW)
 - Technology
 - Productivity
 - Recruitment/Retention
 - Furniture
 - Uncertainty

How is uncertainty considered in forecasts?



Day	SnTable	4/1/2011	4/2/2011	4/3/2011	4/4/2011	4/5/2011	4/6/2011	4/7/2011	4/8/2011	4/9/2011	4/10/2011	4/11/2011	4/12/2011	4/13/2011	4/14/2011
0	0	1054.861	1041.923	1040.373	1255.408	1015.458	1160.367	1284.309	1060.303	1066.33	1129.4125	1295.2422	1075.3304	964.05105	1113.3106
1	0.001001	999.3166	1122.649	1151.784	914.7999	1054.015	1125.612	1017.897	1095.671	1199.474	1236.361	1251.866	1083.3987	1214.3388	1327.5867
2	0.002002	1132.697	1029.791	1015.294	1081.384	988.9515	1039.897	1091.191	970.6278	1030.704	1274.5338	1271.0154	988.29494	1060.3376	1101.6964
3	0.003003	934.302	1072.633	1040.263	1046.728	1035.111	1016.441	888.8951	1013.041	1196.43	1107.7991	1117.0433	1151.7002	921.41448	1142.2326
4	0.004004	1263.749	1168.701	1102.197	926.7996	1270.355	1094.331	1001.568	1101.601	1420.327	1066.2077	1426.3636	1069.4214	1084.8591	1065.3036
5	0.005005	1134.693	1052.625	744.7793	1046.625	1074.288	1031.139	1255.774	958.6404	1104.807	988.2767	1161.6892	1081.305	1118.8922	1104.0949
6	0.006006	978.8539	1098.553	1205.339	894.5751	1216.188	999.7327	1077.215	993.5156	1013.966	1024.9286	926.25668	1121.8146	1095.6527	1116.3598
7	0.007007	1148.974	1046.779	1157.075	1118.86	1069.144	1138.071	1064.113	987.1969	1256.635	1075.0308	1111.8913	1010.0250	1114.4206	1074.9758
8	0.008008	1012.455	1087.627	1272.948	1158.796	1021.377	976.2663	984.2386	1158.156	1099.141	1078.094	1164.3652	1161.7	1182.8271	1100.8802
9	0.009009	1050.31	1288.462	978.1892	1102.34	1027.753	1186.373	1072.75	1063.119	1009.943	1140.0729	1007.8166	1038.6446	786.79254	1054.0991
10	0.010010	951.7076	999.5704	887.9108	1099.227	1227.802	1180.066	1086.876	1213.365	1155.164	815.83535	1159.0569	1101.7465	903.89706	830.61943
11	0.011011	930.2137	1059.297	1146.978	1081.323	1086.961	1003.614	1213.264	1093.995	1269.771	896.04163	1255.3353	1032.8928	1024.5812	1050.0715
12	0.012012	1093.232	1180.234	1019.806	1104.762	854.2367	1222.538	921.408	924.1891	1224.043	1144.2175	931.87912	1116.9380	1061.0087	992.82717
13	0.013013	1153.867	1158.879	1177.155	901.1465	1238.496	1291.429	1079.002	1092.832	1210.731	1047.8039	1280.836	1061.4013	1020.8921	1112.6478
14	0.014014	923.435	854.921	1086.638	1033.565	1186.194	880.1789	1143.397	1046.876	894.1293	1141.7938	1114.5072	1182.1162	1105.7488	1188.8457
15	0.015015	1040.039	1243.783	1000.354	1144.385	995.6453	959.929	1023.814	1024.679	985.1479	1189.5613	947.8924	1199.7716	1087.5498	1080.8349
16	0.016016	1074.992	1080.64	1071.945	1067.193	1068.025	1148.076	1058.367	1113.679	1085.966	1071.1983	1043.2786	1058.0768	1052.2271	1013.5309
17	0.017017	1140.042	1115.265	1177.979	1157.97	1083.041	984.1883	1114.973	1214.475	1024.4238	1056.038	845.47175	1281.9428	1190.0167	
18	0.018018	1272.649	1022.957	1118.982	1044.444	1184.543	1123.757	1056.533	1147.721	1119.77	1363.1982	810.02117	1164.3642	1113.4176	1215.1185
19	0.019019	1086.044	959.8869	1080.174	1237.605	950.7148	1298.226	1174.207	1185.026	1032.034	1156.2974	964.95052	864.00204	1030.9753	849.7881
20	0.020020	1085.276	1013.758	929.9988	1087.117	1030.804	1125.157	952.7088	1136.049	1047.785	990.04991	872.82367	1171.0252	1110.2568	1003.82
21	0.021021	1086.616	1116.143	971.3411	1008.887	980.1428	1057.316	1019.008	1206.942	1025.196	1245.773	950.24649	945.46424	1074.7963	1182.8025
22	0.022022	1081.452	1188.827	1014.909	835.489	1188.028	924.1116	1017.498	1044.727	1160.255	1200.7619	1175.1394	1225.4294	923.41654	1104.8674
23	0.023023	1287.515	1062.87	1124.948	931.7699	1063.929	997.8431	1175.327	1179.81	938.2954	1045.3914	1086.6219	1012.6076	1150.8209	1135.9057
24	0.024024	1005.659	1229.301	1208.18	1095.582	1148.967	1189.853	1191.997	1077.666	1134.425	974.30382	1216.7632	987.80868	1270.6448	1106.395
25	0.025025	1075.84	991.8021	875.2964	1028.41	1110.64	1035.604	945.3722	983.4952	1298.301	979.82012	1200.636	1109.2776	1076.9508	933.89605
26	0.026026	1290.384	1190.981	1076.343	1068.987	1188.887	1187.867	1027.085	1212.886	1026.846	1247.299	1026.971	1098.989	1122.0758	1273.4646
27	0.027027	1209.759	1152	1033.418	1149.096	1010.599	1231.613	1054.573	1199.982	1369.44	1111.588	1133.7511	1090.2516	1050.442	1079.1433
28	0.028028	1097.149	1125.703	1051.611	1041.771	956.4348	1114.166	1227.187	1201.81	1170.846	923.1319	967.33768	1050.0658	1117.5196	1062.8386
29	0.029029	1180.732	970.647	1091.314	1295.467	1049.424	1021.085	1212.866	1026.846	1247.299	1026.971	1098.989	1122.0758	1090.3349	1015.7675
30	0.030030	1205.164	980.1789	991.2713	1107.846	1143.238	1102.411	1134.079	1086.382	1023.905	1047.419	1017.1799	947.03225	809.31844	993.16727
31	0.031031	1166.89	1047.107	1195.54	964.7277	1013.801	846.1125	1095.705	1272.252	1208.999	1146.4712	1034.587	1113.8773	1183.1907	923.58007
32	0.032032	922.2789	1252.001	1063.884	1260.75	997.9544	1265.562	966.7039	1071.742	1173.418	1126.386	988.62446	1100.2964	1006.307	1150.3456
33	0.033033	1129.046	1185.203	1154.842	780.8767	1076.453	1039.876	1198.781	937.0162	1204.858	1032.2849	1024.8325	985.00049	1020.8442	994.15257
34	0.034034	987.8166	1086.191	889.1552	1236.305	862.631	934.8933	1194.842	1071.357	1132.634	1104.2545	1011.983	1025.2211	1244.9174	1127.8735
35	0.035035	1046.204	1073.039	1079.887	1308.927	1099.415	1022.846	887.7195	1182.61	869.236	1088.6494	1140.5007	1063.4504	1073.7887	1128.251
36	0.036036	1282.909	1125.039	1180.303	1029.301	1048.202	984.0505	1144.352	1113.726	1006.748	1113.4547	1012.8389	1242.9324	1015.519	1067.0875
37	0.037037	1259.47	942.5177	1132.546	887.8784	948.8903	982.2034	887.7131	1117.818	1000.11	1083.354	1171.925	1060.238	1011.2718	1142.4111
38	0.038038	1171.054	1083.92	1119.11	900.3877	1183.912	909.7507	1069.992	1019.067	1012.911	1138.9928	1156.97	1188.1465	1031.6381	1113.9978

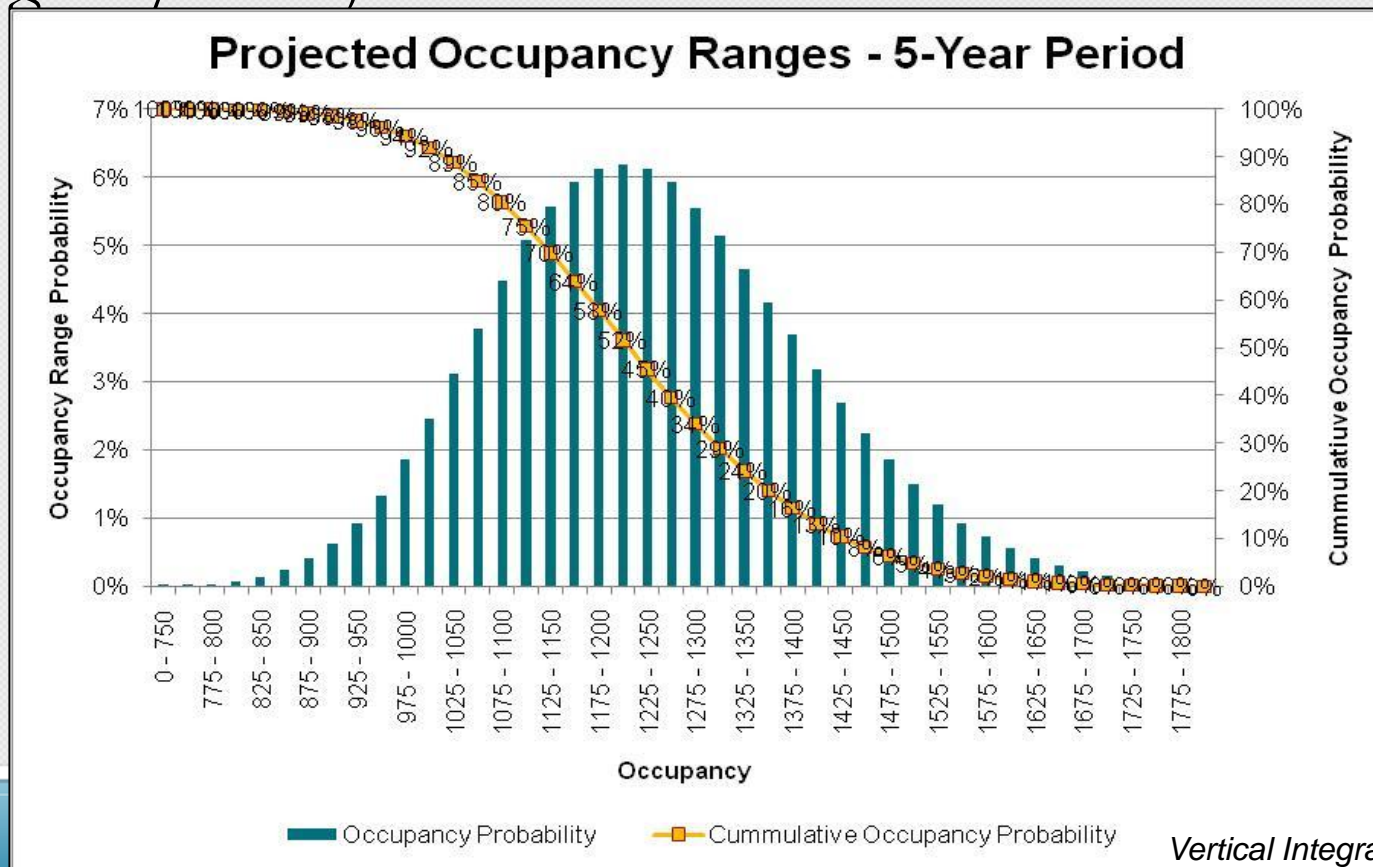


Vertical Integration
Proprietary Information



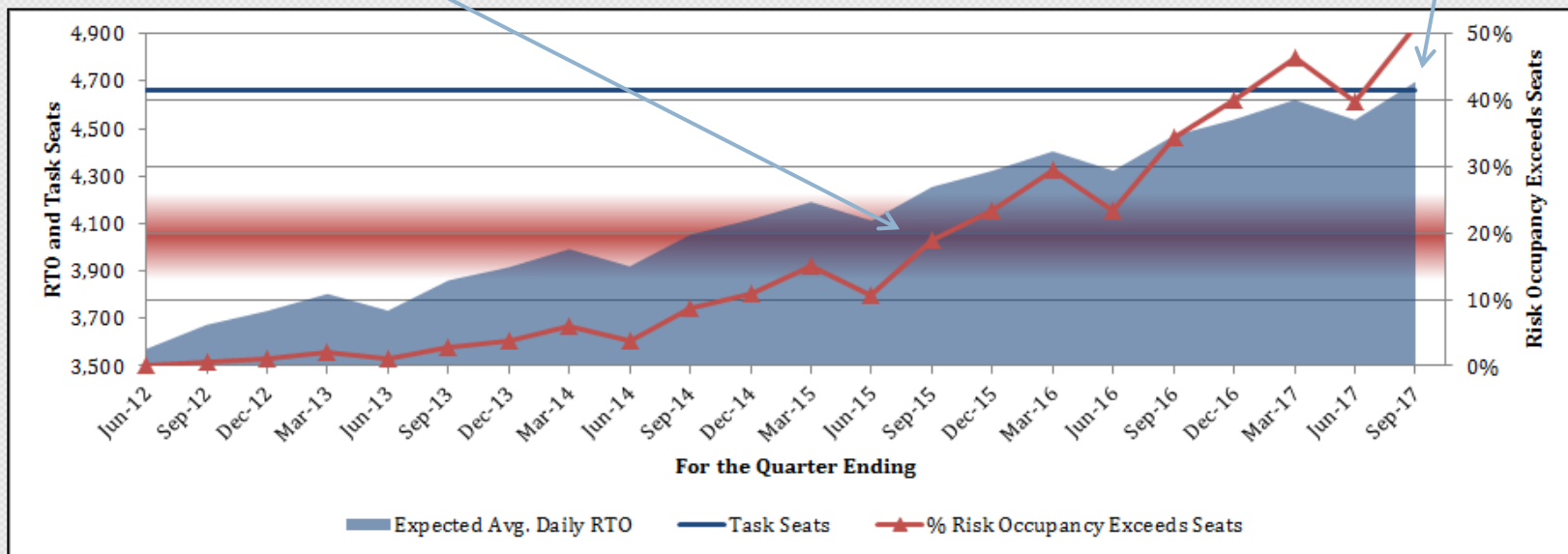
What is the likely occupancy over time?

- The model quantifies the likelihood occupancy will reach certain levels over a given period of time...*

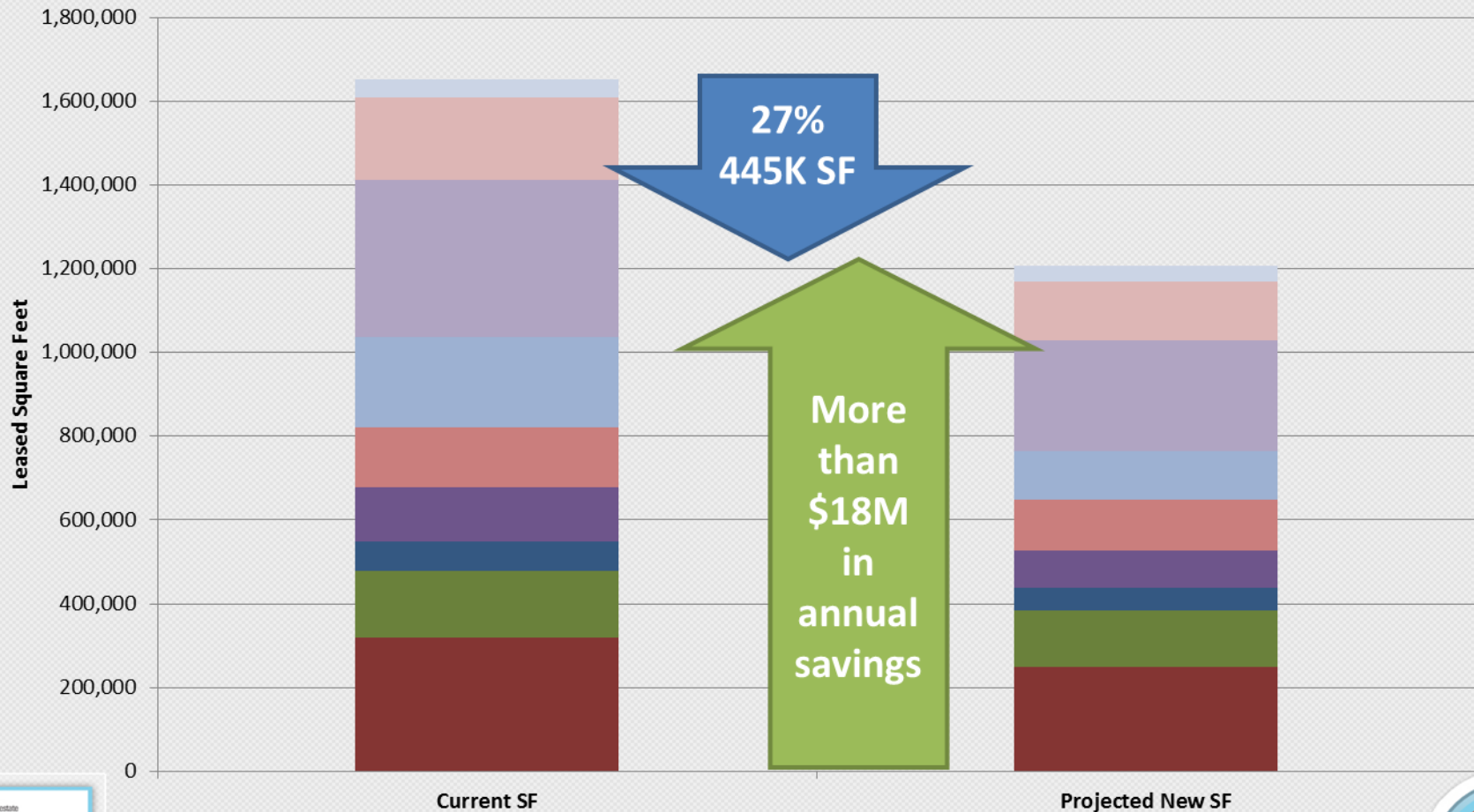


What should be the timing and size of flexibility options?

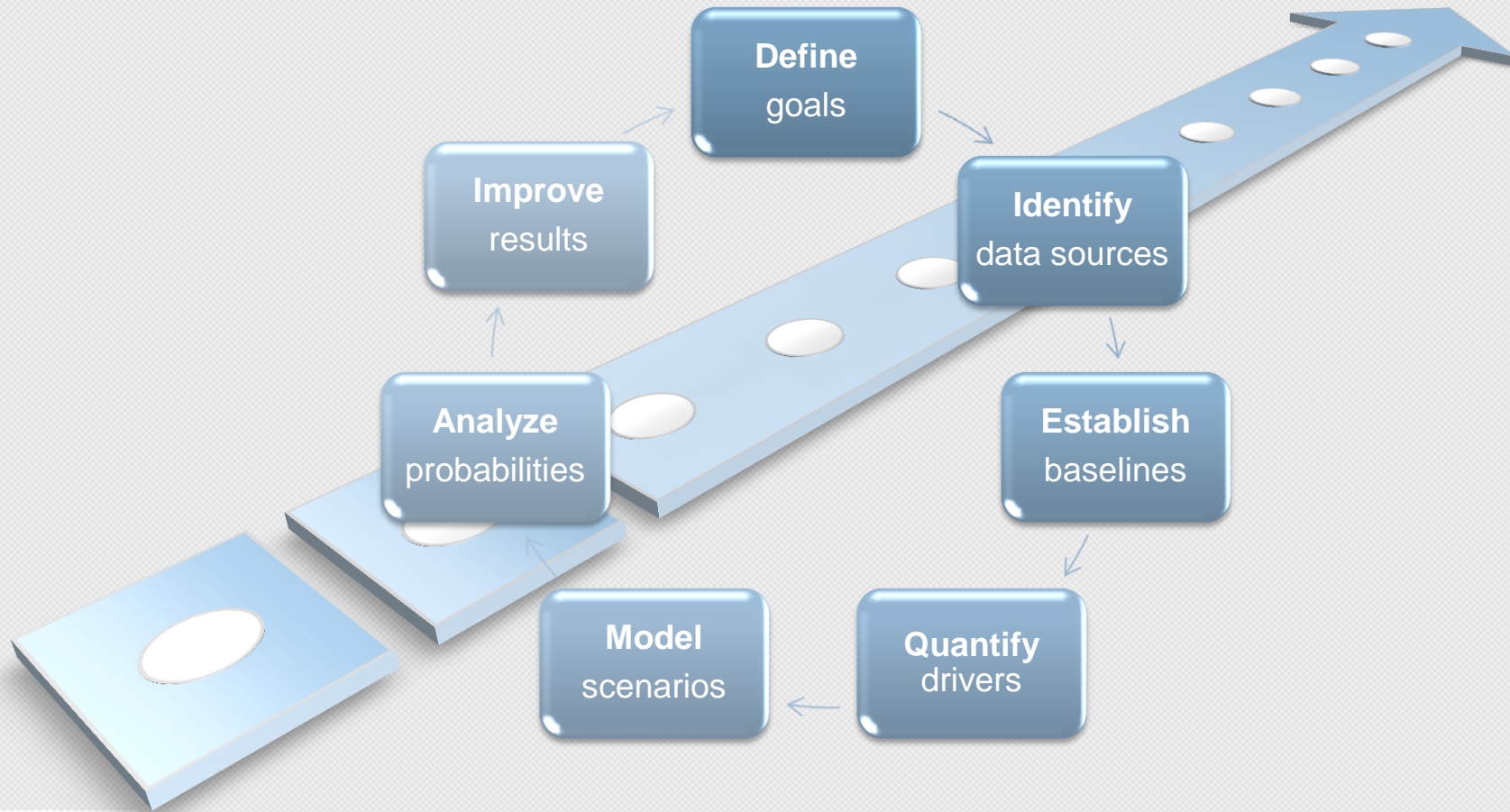
- *When will occupancy demand meet our risk tolerance?*
- *When will occupancy exceed available seats most of the time?*



Documentable success: Analytics are driving significant SF reductions



Success breeds success through continuous improvement



Questions?