

white paper

Achieving superior **financial flexibility** through

driver-based budgeting and planning



In good economic times and bad, all organizations need to efficiently allocate resources to both company operations and special projects. Transparency and flexibility are vital to planning processes, so as economic conditions change, organizations can use information to make decisions and determine how to reallocate resources for the future and reduce costs. This transparency and flexibility is achieved by having driver-based budgets for operations planning and project-based plans for new projects. Project based plans can be thought of as an additional layer of planning that add to the existing baseline budget. As plans are met, or exceeded, more plans can be taken on. If the economic environment gets rough, projects can be put on hold. Driver-based planning seeks to identify the key business drivers of an operation and create business models that use these drivers to predict future results. Organizations can become more agile and can more effectively plan for different economic scenarios by building flexible plans based on the key business drivers. In addition, driver-based plans provide needed visibility to the impact of alternative strategies before decision-makers are required to take action. Much of this can be accomplished through the implementation of driver-based “what if” scenarios.

Many organizations find difficulty optimizing decisions because management does not have clarity regarding the financial and operational impact of their decisions. Although most organizations have a good understanding of the key drivers of their business, they confront challenges when trying to model these drivers to anticipate future results and evaluate alternatives. Major challenges include a lack of centralization and the ability to quickly recast plans through “what-if” analysis. Managers typically use individually customized spreadsheets to formulate their plans. The proliferation of spreadsheets makes managing data quality and model calculations difficult because the spreadsheets are not integrated and exist outside of any accounting or budgeting applications. When data is stuck in spreadsheet “silos,” reporting on and sharing of the data among managers and executives in the approval process is not easy. Discrepancies accumulate as the number of accounts increase causing difficulty with tracking which numbers are correct and where the bad data entered the system.

As more entities within a company adopt driver-based plans, the lack of a centralized approval workflow through decentralized spreadsheets can become complicated, full of redundant steps and overly time-consuming for both departments and finance function. Organizations lack visibility into the entire process; they don’t know the status of requests and cannot easily see which steps remain to move requests toward approval. This lack of visibility can cause difficulty complying with regulations and policies for establishing data stewardship and accountability in strategic plans and in planning and budgeting processes.

Whether due to familiarity or application requirements, many users prefer spreadsheets as their primary interfaces. Spreadsheets can serve adequately at the interface level, but organizations need to evaluate how to improve their underlying management of information, communication of the plan, reporting, analysis and workflow. One increasingly popular option that is quick to deploy is a cloud based budgeting and planning solution. It can provide the centralized control and systemization to mitigate these challenges. A key consideration in evaluating cloud options should be the quality of reporting and analysis for organizations to track plan objectives and results in the context of financial metrics as well as strategic plan goals and objectives.

This brief describes how Host Budget provides the ability to manage driver-based plans and quickly create alternate “what if” scenarios. To illustrate the challenges, this brief looks at the planning and budget process compiled from several Host Analytics’ customers.

Achieving flexibility and agility using Host Analytics Budget’s driver-based plans

The practice that many organizations employ for this process is to use spreadsheets. However, as discussed above, this leads to inefficiencies. With spreadsheets, organizations end up spending more time collecting, compiling, recalculating and printing the plan than analyzing the sensitivities of the plan in the current economy. Host Budget leverages the benefits of a spreadsheet (flexibility and common financial language) while mitigating the spreadsheet’s weaknesses by providing centralization and control. Host Budget supports the budget collection process through the use of “budget templates.” These templates have the look and feel of Excel and support Excel formula syntax. They are displayed in the browser for centralized control and write budget information back to a centralized database. Budget templates are used to:

- Collect budget information from budget managers
- Collect budget drivers from budget managers
- Retrieve necessary information from the database and render the data in an Excel grid so they can be used for calculations
- Perform calculations using Excel syntax to calculate budget values based on values stored in the templates or from other templates retrieved from the database
- Write budget values back to the centralized database

To further systemize the budget templates, Host Budget provides a simulation engine which leverages the discrete formulas in Excel but allows for centralized processing across all templates or selective templates, across all budget entities or selective budget entities. This combination provides the flexibility of Excel and leverages the common Excel domain knowledge while placing controls, centralization and systemization on the budget collection processes, business modeling processes and the financial reporting processes.

Case example: driver-based health care planning

The following is a case study that combines methods and experiences from a number of different organizations that use Host Budget by Host Analytics. The challenge of combining the experiences was to keep the example simple enough to fit in this article but provide enough of the complexities to see how the task can be accomplished. The following provides sample screen shots and descriptions of how the sample health care financial model was built:

- 1 **Corporate Drivers** During the initial creation of the budget, drivers are set at a corporate level. These drivers impact all companies, divisions and groups. The driver scope can range from overarching drivers that impact every company/facility, to regionally based drivers and then individual division/location/department drivers. In the example below, set in the corporate planning office, we have overarching drivers and local drivers – days in the month for the current fiscal year. This driver is used to calculate patient days (facility beds times days in the month) for a medical facility.
- 2 **Average reimbursement rates** per patient for various charges. This is just an example so we focused on the billable rates for a bed and for physical therapy support across pay types (Private, Medicaid, Medicare, etc.)
- 3 **Target goals** Set target goals for the individual properties related to number of beds and occupancy.

Scenario: 2009 Budget	2009 Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Entity: 0000-Default - Corporate Globals	2009	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09
Corporate Assumptions												
Days per Month	365	31	28	31	30	31	30	31	31	30	31	30
Standard Daily Pay Rates												
Private Pay	229.17	225.00	225.00	225.00	225.00	225.00	225.00	225.00	225.00	225.00	225.00	225.00
Medicaid	181.83	180.00	180.00	180.00	180.00	180.00	180.00	182.00	182.00	184.00	184.00	184.00
Medicare	170.50	168.00	168.00	168.00	170.00	170.00	170.00	170.00	172.00	172.00	172.00	172.00
HMO/Private Ins	207.50	200.00	200.00	200.00	205.00	205.00	205.00	210.00	210.00	210.00	215.00	215.00
Veterans Administration	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00	170.00
Standard Ancillary Rates												
Private Pay	33.00	32.00	32.00	32.00	32.00	32.00	32.00	34.00	34.00	34.00	34.00	34.00
Medicaid	26.42	26.00	26.00	26.00	26.00	26.00	26.00	28.00	27.00	27.00	27.00	27.00
Medicare	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
HMO/Private Ins	32.50	30.00	30.00	30.00	30.00	30.00	30.00	35.00	35.00	35.00	35.00	35.00
Veterans Administration	22.83	22.00	22.00	22.00	22.00	22.00	22.00	22.00	24.00	24.00	24.00	24.00
Facility Standards												
St. Louis - Beds	221	221	221	221	221	221	221	221	221	221	221	221
- Occupancy %	85%	85%	85%	85%	86%	86%	86%	87%	87%	87%	88%	88%
Kansas City - Beds	168	168	168	168	168	168	168	168	168	168	168	168
- Occupancy %	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Lincoln NE - Beds	203	203	203	203	203	203	203	203	203	203	203	203
- Occupancy %	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Tulsa - Beds	198	198	198	198	198	198	198	198	198	198	198	198
- Occupancy %	72%	70%	70%	70%	72%	72%	72%	72%	74%	74%	74%	74%

The above screen is a sample input template used by Host Budget. The template is designed with the look and feel of Excel displayed in a browser, has the same formula syntax as Excel for internally referenced formulas, and has imbedded Host Analytics intelligence to:

- Display values in an Excel-like interface but store the values in a database for dynamic reporting. (A relational database is a database that groups data using common attributes found in the data set and is optimized for transactional reporting. OLAP databases use a multidimensional data model, allowing for complex analytical and ad hoc queries with a rapid execution time)
- Store the Excel-like template specifications in a relational database
- Provide workflow over the budget/forecast creation process for template completion and approval

Facility Manager Once corporate level drivers are set, the facility managers can make adjustments, enter values to the budget and complete the planning process based on local conditions that impact the facility. The first screen example below is of the St. Louis facility and highlights:

- 4 Days per Month, Total Beds and Standard Occupancy Percentages from the corporate template above, retrieved from the centralized database. (See the top of section 3 in the screen above for the facility standards of beds and occupancy for the St. Louis facility.)
- 5 The Average Contract Rate by pay type from the corporate template above, retrieved from the centralized database.
- 6 The input percentages provided by the Facility Manager allocating the occupancy across the different pay types. (The cells with a yellow background identify input cells in the template.)
- 7 Note the formulas are created using Excel syntax and include the ability to round to the whole dollar. Also note that Veterans Administration pay type is used to balance the amounts to equal 100%.
- 8 Patient Beds Occupied is calculated by taking Total Beds times the number of days in the month.
- 9 Revenue is calculated by taking Patient Beds Occupied times Occupancy Percentage times Average Contract Rate.

Compare Scenario		2009 Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Description		History 08	2009	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09		
H	N	Scenario : 2009 Budget															
H	N	Entity : St. Louis West - Operations															
H	N	Template : HHI2 - Health - Facility Manager															
H	N	Currency : USD - US Dollars															
H	N	Formula: =1-(AR42+AR37+AR32+AR27) 7															
H	N	Sum 0.149999999999999															
H	N	Drivers															
RA	N	Days per Month	365	365	31	28	31	30	31	30	31	30	31	30	31	30	
RA	N	Total Beds	221	221	221	221	221	221	221	221	221	221	221	221	221	221	
RA	N	Standard Occupancy	55%	65%	65%	65%	65%	65%	66%	66%	67%	67%	67%	68%	68%		
C	N	Room Revenue	8,544,064	10,172,516	834,327	755,524	836,723	831,050	861,715	837,577	886,000	899,842	871,540	919,272	888,070		
L	N	Private Pay - Revenue	2,292,115	2,125,729	196,475	186,269	206,415	206,775	223,815	226,219	247,950	258,970	258,519	262,279	254,270		
L	N	Occupancy Percentage	23%	23%	20%	20%	21%	21%	22%	23%	24%	24%	24%	24%			
C	N	Patient Beds Occupied	9,589	11,880	891	804	891	919	995	1,006	1,102	1,102	1,066	1,118	1,082		
RA	N	Average Contract Rate	229	229	225	225	225	225	225	225	225	235	235	235			
C	N	Medicaid - Revenue	1,265,570	1,438,832	128,240	168,540	126,240	118,889	122,040	115,392	125,398	125,398	122,544	128,616	124,384		
L	N	Occupancy Percentage	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%			
C	N	Patient Beds Occupied	6,654	7,913	888	803	888	856	878	858	889	889	885	899	876		
RA	N	Average Contract Rate	182	182	180	180	180	180	182	182	182	182	184	184			
C	N	Medicare - Revenue	2,269,644	2,690,614	224,448	262,776	224,448	223,210	238,520	223,210	234,090	236,844	229,276	246,456	232,716		
L	N	Occupancy Percentage	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%			
C	N	Patient Beds Occupied	13,307	15,829	1,336	1,207	1,336	1,313	1,356	1,313	1,377	1,377	1,333	1,398	1,363		
RA	N	Average Contract Rate	171	171	160	160	160	170	170	170	172	172	172	172			
C	N	HMO Private Ins - Revenue	1,841,585	2,189,730	178,280	166,808	178,200	179,375	185,329	179,375	192,780	192,780	186,480	200,380	193,930		
L	N	Occupancy Percentage	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%			
C	N	Patient Beds Occupied	8,875	10,552	891	804	891	875	904	875	918	918	888	932	902		
RA	N	Average Contract Rate	208	208	200	200	200	205	205	205	210	210	215	215			
C	N	Veterans Admin - Revenue	941,468	1,119,630	113,569	162,518	113,560	164,210	59,969	85,258	85,850	85,850	83,330	87,480	84,320		
L	N	Occupancy Percentage	13%	13%	15%	15%	14%	13%	12%	11%	11%	11%	11%	11%			
C	N	Patient Beds Occupied	5,538	6,585	668	603	668	613	588	525	505	505	489	512	466		
RA	N	Average Contract Rate	170	170	170	170	170	170	170	170	170	170	170	170			
C	N	Total Room Revenue	8,544,064	10,172,516	834,327	755,524	836,723	831,050	861,715	837,577	886,000	899,842	871,540	919,272	888,070		

The second example (below) shows the calculation of both Physical Therapy Revenue and Expense based on inputs from the Facility Manager. (This is a simplistic model that leverages a health care example and hopefully gets the point across that there are many different departments that could have contract rates as well as line item expenses.) The screen highlights the following:

- 10 Patient Beds to PT Hours is a driver that calculates number of Physical Therapist hours per month to the number of beds occupied. In this case the Facility Manager is estimating 1/2 hour for each bed occupied. Average PT Hour Cost is the average fully loaded hourly rate for the physical therapists at this location.
- 11 Standard Reimbursement Rates are from the first template prepared at corporate and they represent the reimbursement rate per hour for each of the different pay types.
- 12 PT Revenue is calculated by multiplying the Standard Reimbursement Rate for this pay type times the Patient Beds to PT Hours Ratio times the number of beds occupied for this rate type.
- 13 PT Cost is the Average PT Hour Cost times the total number of hours.

The screenshot displays the Host Analytics CPM V9.0 interface. At the top, there are navigation tabs for Budget, Consolidation, Reports, Scorecard, and Maintenance. Below this is an 'Input' section with a 'Forecast Method' dropdown and a formula bar containing '=A090*(A0554*A033)'. The main area is a spreadsheet with columns for months (H, N, C, L, RA) and rows for various financial categories. Red boxes and callouts highlight specific areas: callout 10 points to the 'Patient Beds to PT Hours Ratio' row; callout 11 points to the 'Standard Reimbursement Rate' section; callout 12 points to the 'PT Revenue' section; and callout 13 points to the 'PT Cost' section. The bottom of the spreadsheet shows a 'Net PT Contribution' row with values ranging from 128,959 to 14,767.

While the above is a simplified example, the template can be extended by hundreds of facilities, departments and line items. In addition, Host Budget's simulation engine allows budget preparers to change global corporate assumptions on days and rates (in the first screen) and dynamically change all of the values in all of the facilities.

By integrating the Excel look and feel in a browser and linking the template to a database, Host Budget customers achieve:

- **Accuracy** They don't need to worry about broken links and broken formulas that could exist in one Excel file and not the others because the template definition is centrally maintained and one definition is maintained for all the facilities
- **Agility** Because budgets can be recalculated easily to account for changing market conditions
- **Alignment** The process works at both the macro level (corporate) and the micro level (facility/line item) and the impact of changes in one area can be measured in other areas

Key features to succeed

According to several research firms, a significant percentage of organizations still rely on spreadsheets to create and manage budget plans. Given the drawbacks, why do they continue to do so? Surveys indicate that organizations believe specialized calculations are easily accomplished; that is because spreadsheets are ubiquitous, working with their interfaces requires minimal training; and spreadsheets can easily be used to create flexible input areas to solicit input from different sources.

Because spreadsheets are ubiquitous within organizations, budgeting and planning systems must have the following attributes to support collaboration between departments and functions:

- The look and feel that can appear exactly like a traditional spreadsheet
- Runs in a browser so that the interface is accessible from anywhere and data entered via the browser is updated in the central repository
- Builds parameter-driven, database-driven spreadsheet templates that are centrally controlled and easily updated by all constituents
- Stores revenue and expense data in a database and retrieves timely information from the database when requested
- Includes a workflow engine with a control point for managing information about when forecasts are completed for all departments

For more information, please visit www.hostanalytics.com or call 866 391 HOST (4678)

About the Author

Ric Ratkowski, Vice President of Product Strategy. Ric manages our overall product strategy and brings over 25 years experience in Finance and Accounting. He has held strategic roles in the design of financial analytic and performance management applications within the top software companies in the industry including Braun Technology and Arbor Software. Additionally, Ric held financial executive level positions at multi-national corporations with first-hand involvement in the financial planning and budgeting process. He has been a key member of the executive team at Host Analytics since 2002 and pioneered the SaaS infrastructure at Host Analytics. Ric has a Masters in Finance and a Bachelors degree in accounting from St. Louis University and is a CPA. He lives with his family in St. Louis, Missouri.

About Host Analytics, Inc.

Host Analytics helps executives see the full implications of decisions – both risk and reward. Our leading on-demand corporate performance management solution helps financial executives improve their budgeting, forecasting, financial consolidations, dashboarding, scorecarding, reporting and analysis. Most importantly, it helps drive fact-based decisions based on sound financial justification. Host Analytics delivers its product suite using Software-as-a-Service (SaaS) on-demand delivery to increase security while reducing cost and deployment time. Founded in 2000, Host Analytics serves the enterprise, large and midsize companies across industries. Host Analytics was included in JMP Securities' prestigious "*Hot 100: The Best Privately Held Software Companies*" and was the recipient of the Best of SaaS Showplace Award from market research firm THINKstrategies.

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Host Analytics Headquarters:
Host Analytics, Inc.
900 Island Drive, Suite 203
Redwood City, CA 94065 USA

Phone: 650 249 7100
Fax: 866 896 1738
Toll Free: 866 391 HOST (4678)
Email: info@hostanalytics.com

www.hostanalytics.com