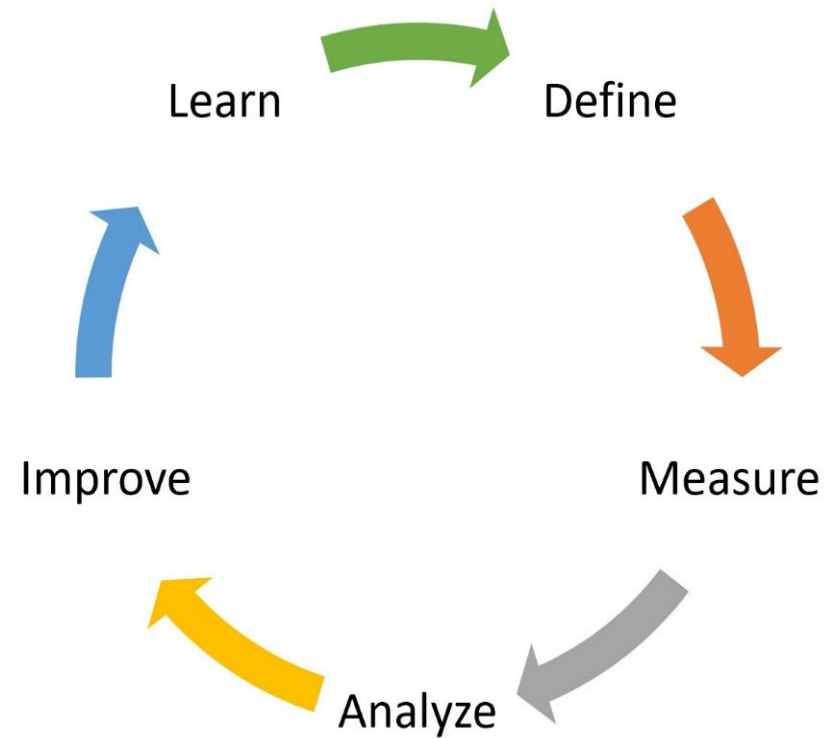


▶ PEXA

**Case Study: Improving Cost Assumption
Database Workflow for Business
Modeling**



Process Summary

Define

- Create team charter.
- Map an opportunity tree to identify gaps.
- Develop a “macro map” to identify general process.

Measure

- Map current process (detailed)
- Utilize Kano Modeling to identify critical path items.
- Identify stakeholders.

Analyze

- Interview users, voice of the customer.
- Review data sources for the modeling information.

Improve

- Identify major contributing systems and develop a new structure.
- Develop new “macro map” to drive key integration with stakeholders.

Learn

- Train stakeholders on new macro based process.
- Develop “next steps” to work towards a new integrated system.

Define

Charter: Improving Cost Assumption Database Workflow for Business Modeling



PURPOSE

- To simplify the existing "Cost Assumption Database" or develop a new tool, along with supporting processes and training materials, in order to ensure consistency and accountability in maintaining and communicating common pricing assumptions to be used in all internal and external processes and communications requiring a "price call".

IMPORTANCE

- The existing Cost Assumption Database file is an important tool that feeds many of our operational and financial models, making it an integral part of how we run our business.
- The existing tool is a legacy file that is cluttered and confusing, has references to numerous closed facilities and may have flaws, all of which drive a lack of confidence in the output of the file and the other models that it feeds, including the LP.
- Because the tool is cluttered and confusing, updating and maintaining it requires a large investment of time and errors are common, driving a large amount of re-work.
- There are a number of internal constituents that rely on this information and there is, at times, a lack of clarity around the source/timeliness of the updates. The tool lacks capabilities the company needs and it has been adopted for unintended purposes.

SCOPE

- Redesign the tool and document a user manual and training plan. Scope will be multiple output formats.
- Re-design the processes for (i) capturing all pricing assumptions including source of the price call (forward call specifically), frequency of updates and mechanism for accountability and (ii) publishing the price file to the appropriate customers of the file.
- Out of Scope = System solutions other than MS Office-based or other alternatives that cannot be implemented by the delivery date.

RESOURCES

- Team Members
- Sponsor
- Team Leader
- Coach

DELIVERABLES (EXPECTATIONS)

- Voice of the customer analysis along with as-is and ideal state process maps for price-call capture, communication and use.
- New or simplified price file in MS Excel/Access/Database Solution. Ability to create canned reports or easily adaptable reports.
- New processes for maintaining/updating the file and publishing the updates to the relevant customers of the file on a regular timeline.
- Documentation of user manual for the tool and an accompanying training plan for existing and potential future users. File integration is important to the process.

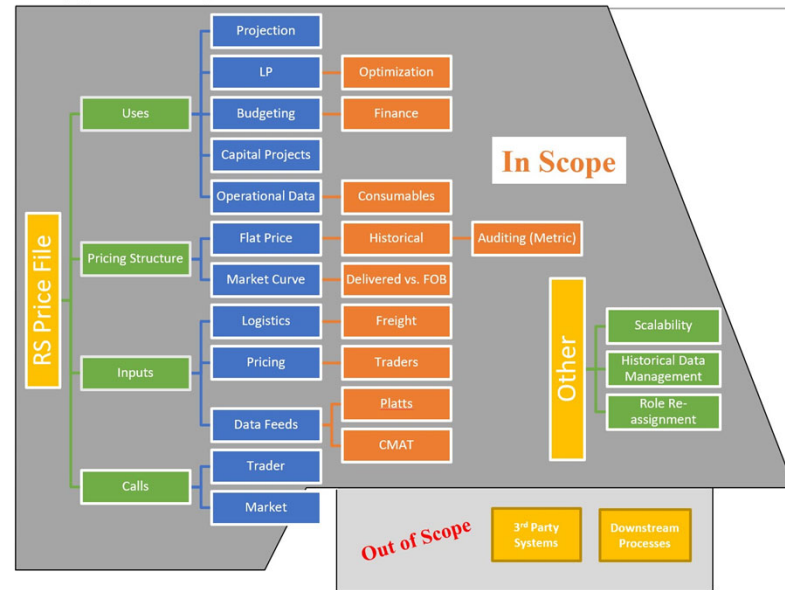
METRICS

- Delivery of the purpose on-time and in full. Document current errors in process
- Financial Model/Income Forecast accuracy.

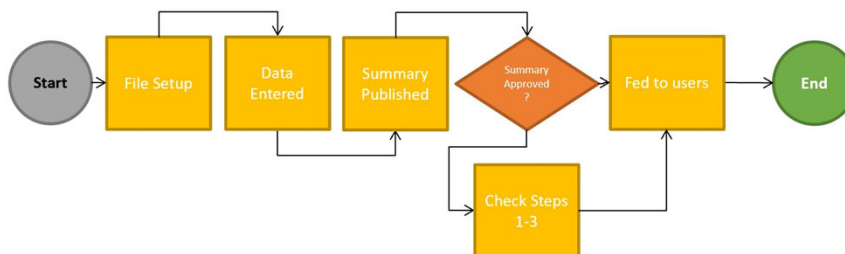
SCHEDULE

- Team Launch: January 21, 2014
- Deliverables Completed: March 31, 2014

Opportunity Tree



Macro Map



Analyze



Interview Users

Who	What is the purpose of the Database	Likes	Dislikes	Suggestions	Must Have	Change	Pricing Requirements
Weekly Economics, RRV's			circular references, clean up old cruises	Align with RRV's	accurate freight and crude drifts	freight review	Foreign: 7 wk dated Brent FOB Domestic: 4-5 wk WTI or Ice Brent FOB or Delivered
LP Econ, Project Justification		History (R&S Standard Output)	back and forth between active file and budget		All pricing (sale, purchase), Unit margins, Summer/winter scenarios Tiered pricing	definition of how sheet built Delivered pricing for non Babbar Domestic: Clean file	
Income & Projected LP		Flat price vs. diff		start over	style work for hedged business. Crack basis as required entry. Discretion specific. Prices incorporated vs. call.	NBBC must reconcile	market calls not delivered pricing
LP, but gets prices through sub process with AM		Easy to update	manually shift data (doesn't roll). Don't know when data pulled into Flat Plus	nowhere to enter different grades of components	place to enter diff. easy to manipulate. Enter components.	roll to new month	relative to NYMEX at NYH
Optimization tool			complicated 2 PM Monday one of busiest times. No understanding of file use. Timing issue with pricing. not unified pricing, lack of understanding	start over, NBBC reconciles with pricing	commodity pricing separate from delivered. Labeled cells, details. Multiple entries	automate pricing from web. Clear old data. Process map for delivered. Timing as far out as you want	NG basis + transportation, Botane delivered, Benzine
		Easy entry	no feedback, complicated	enter multiple inputs by quality: P&L should interleave. Enter multiple times per week.	enter multiple inputs by quality: P&L should interleave. Enter multiple times per week.		NYH pricing
			how do we map cells?	streamline freight calls			30 day call
Income Projections, planning vs. financial side			unneeded prices, things missing. One tool for many things	everything priced at refinery gate vs. delivered	audit loop, structured approach	Argus + basis, NYMEX + basis for future. NBBC for logistics price	
Optimization tool based on margins and market values we tweak refinery operation		good value in having an economic price set tool to make decisions on changing market conditions	tough to follow, lack of organization not intuitive where to put data		Place to enter diff and clear instructions on what to enter (and where)	Easier to follow, discussion with other traders on calls, remove circular references	a. 0.3, 1%, VGO, shikida, Nigerian straight run (do we need all of theory) b. Resid: broker quotes, include cost to deliver to NYH c. VGO: pricing is based on historical data vs. crude and 70/30. Shop strongest trades that happened and use that for current

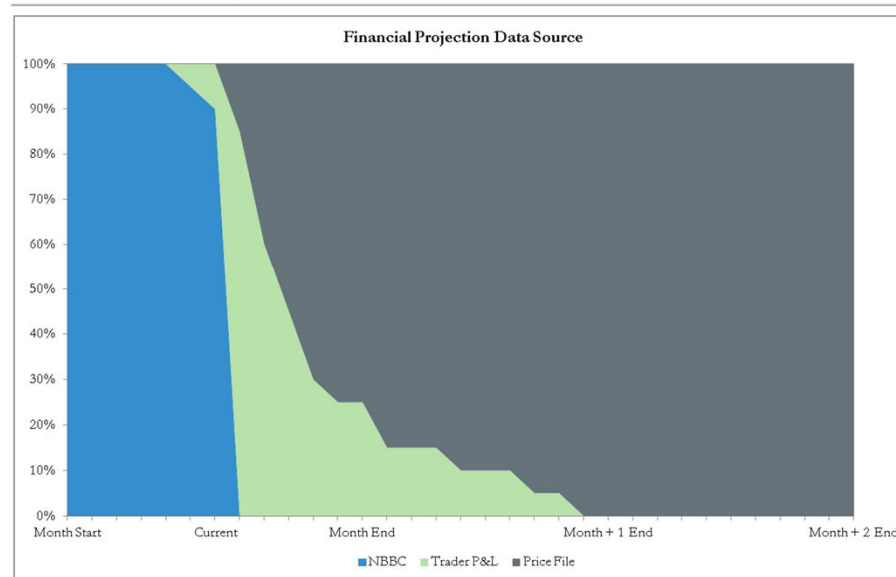


Brainstorming – voice of the customer

Database Front End Brainstorming	Database Front End Brainstorming - Interviews 2.19.14
Inputs	Rules/Definitions
Easy inputs for Freight Pricing Clear Input Instructions Easy Inputs on Crude Data (Pricing) Clearly labeled descriptions (i.e. Lt. Naphtha vs. Hvy Naphtha) Logistics econs (@ refinery gate)	Clear Definition I/O Set of Rules I/O What should pricing represent? Includes Logistics, Refinery Gate Cycle timing for inputs Simplify inbound logistics
Inputs from Other Sources	Formatting
Pull from trader P&L (Diff's, curve & fwd sales) Forward crude and products Adjustable cracks (price overrides)	Simple & Transparent Single application for past & forward Reused simplicity product/comp/crude Easy to use & procedures Show 3 mo forward and 3 mo history roll monthly management
History/Archive	History/Archive
Historical archive to include all history History viewable while entering data Log changes (history) Historical archive (read only) Continue to show last weeks call against this week and future to quickly determine shifts	Reconcile NBBC & P&L Sign off/Sanity check via e-mail reconcile timing historicals/call auditability Logistics actualization time charter, tank contents Bring in actuals
Format/User Interface	Start Over
Editable document Price call adjustments must be easy updatable by traders & others Fix file corruption issues Easy data access Shared data access Easily accessible assumptions Pull in easily to LP for plan and econ calculations Feed to Pi	

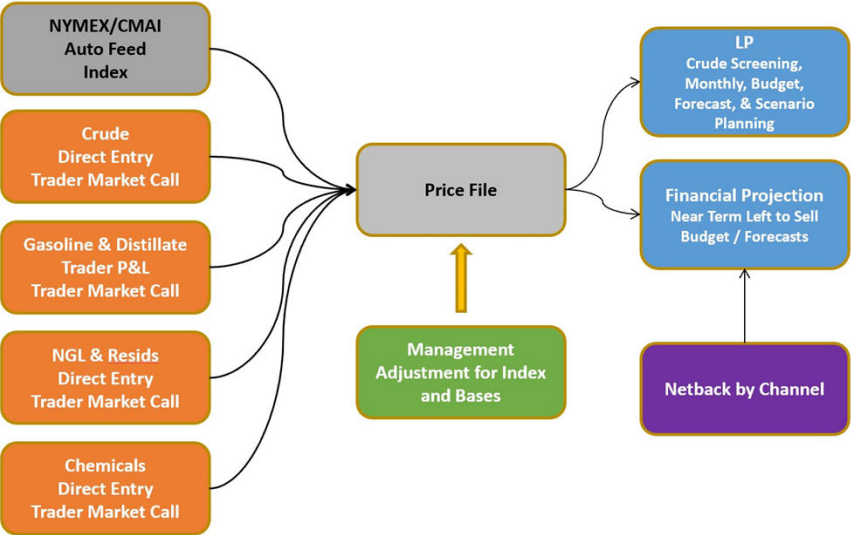


Financial Projection Data Sources



Improve

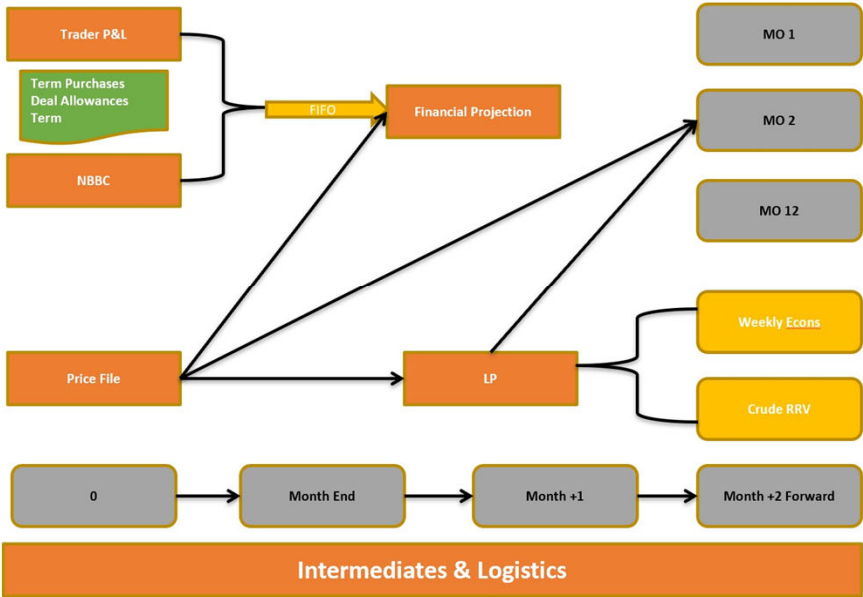
Price File Input / Output



Three Developing Systems

1. Netback by Channel (NBBC)
 2. Trader P&L
 3. Price File
- NBBC and Trader P&L output should be the same
 - Customers:
 - Financial Projection – requires as much actual data as possible (including forward sales and purchases)
 - Derivatives – Currently roll into a single line item on the projection. When forward cracks are executed for specific products, does that need to be broken out separately.
 - Logistics – some product pricing is entered as delivered and others FOB
 - Crude generally entered as FOB with crude freight estimate from shipping for waterborne. FOB purchases in the Gulf may be an outlier.
 - Budgets – Nearly 100% forward calls
 - Forecasts – Mix of actuals and forward calls
 - LP – requires Delivered crude & Intermediates and FOB Products for most accurate results.
 - Uses incremental pricing, especially on products
 - For crude – close term pricing should be mostly set, but outer terms are left more flexible on crude types and pricing.
 - Logistics outside of the refinery are not considered.
 - Lookback needs – current using trader calls, but that can be reviewed (market or PES actuals?)
 - Capital & Engineering – require actuals and forward calls.

Mind Map for Price File



Learn

Timing

Timing	Source	Customers
Actuals	SAP / Trader P&L	Financial Projection Capital & Engineering Lookback?
BALMO	Trader P&L	Financial Projection
Forward Call - to Month End	Commercial (Trader P&L or Direct)	LP
Forward Call - Month +1	Commercial (Trader P&L or Direct)	Financial Projection LP
Forward Call - Month 2+	Commercial (Trader P&L or Direct)	Financial Projection LP Budgets Forecast

Price File may become a tool to gather information from the Trader P&L and Commercial Direct (for pricing not captured in a P&L).

- One source of data
- Auto feed from Trader P&L when possible
 - Cases will need to allow for upper management adjustments when needed
- Archival storage – will also house multiple cases
- Feed for the LP and longer term Financial Projections/Budgets

Next Steps

- Develop Phase II
- Implementation
- IT Database build
- Front End User face build

[Learn more](#)

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