Story telling Assignment – Business Intelligence (BI)

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1. SmartHome Dashboard

The total power consumption of the SmartHome throughout the month is 1620kWh. Out of which, the highest room that consumes up the power is **Living Room** with 32%. We can also identify inefficient features, which continue to consume power even when used sparingly such as Lights, Heating, Security, TV and PCs and Kitchen. Heating is maintained at 24 Celsius in Living Room, Emily's Bedroom, Oliver's Bedroom and Kitchen. This dashboard can help to anticipate next month's bills with predictive estimates, right from the tooltip. It also gives us the idea of where the power consumption can be reduced (Living Room) if used efficiently.

2. Financial Management Dashboard

Total AR and **Total AP** widgets tell us a summary of how much is owed to the company versus how much the company owes.

Accounts Receivable (AR) is a current asset account that keeps track of money that third parties owe to you. These third parties can be banks, companies, or even people who borrowed money from you.

Accounts Payable (AP) is a current liability account that keeps track of money that you owe to any third party. The third parties can be banks, companies, or even someone who you borrowed money from.

In this case, AR/AP ratio is 4:1 which is a higher ratio and indicated that the company has adequate cash and financing to pay its bills. It is in good financial condition. These numbers are organized by due date in the “Total AR Aging” and “Total AP Aging” bar charts. The liability amount of AP decreases after 1 month but after that it remains approximately constant till the due date. The Assets amount of AR decreases exponentially till the due date. This can be used to help the company ensure that they allocate resources appropriately. For example, the AR Aging widget could help the company determine where AR resources should be assigned in order to increase the chances of obtaining payment from customers.

DSI is a measure of how long it takes for a company’s inventory to turn into sales. The shorter the better because the company carries less inventory and hence less cash is tied up. The current DSI for this company is 10 days which is pretty good.

DSO is a measure of how long it takes a company to collect on its accounts receivable. The higher the DSO, the slower the collecting – that is a bad thing. The faster the company can collect, the more options for the company such as investing in more inventory to turn into sales. In this case, the DSO is 7 days which is quite an ideal result.

DPO is a measure of how long it takes the company to pay it's accounts payable. It's the opposite of DSO – the longer it takes the company to pay, the more opportunity the company can use the money to generate sales. Most creditors only like to give 30 days of credit. This company's DPO is 28 days which ideal as it is in the range of 30 days.

The Current Ratio measures a company's ability to pay current, or short-term, liabilities (debts and payables) with its current, or short-term, assets (such as cash, inventory, and receivables). A company with a current ratio less than 1.0 does not, in many cases, have the capital on hand to meet its short-term obligations if they were all due at once, while a current ratio greater than one indicates the company has the financial resources to remain solvent in the short-term. This company has a Current Ratio (CR) of 1.86 which is good enough to indicate a well-financed situation of the company.

The Equity Ratio is a financial metric that measures the amount of leverage used by a company. It uses investments in assets and the amount of equity to determine how well a company manages its debts and funds its asset requirements. A low equity ratio means that the company primarily used debt to acquire assets, which is widely viewed as an indication of greater financial risk. Equity ratios with higher value generally indicate that a company's effectively funded its asset requirements with a minimal amount of debt. The company's equity ratio is 75.38% which indicated they are not at much financial risk.

Debit Equity Ratio is a financial ratio indicating the relative proportion of entity's equity and debt used to finance an entity's assets. It is also a measure of a company's ability to repay its obligations. Optimal debt-to-equity ratio is considered to be about 1, i.e. liabilities = equity, but the ratio is very industry specific because it depends on the proportion of current and non-current assets. This company's debt equity ratio is almost optimal at 1.1%.

The trend of **Net Working Capital** and **Gross Working Capital** does not follow a similar trend till August. After August it follows a similar pattern with Net Working Capital at a lower rate. The pattern becomes similar after it reaches the maximum Net Working Capital (470K) and maximum Gross Working Capital (560K) in the month of August.

The last graph is the profit and loss summary which increases monthly, with few sudden decreases in the few months (March and August) and reaches a maximum value in the month of December.