MDX expressions for Hilarity Haven Circus

1. KPI definitions

a. Rising trend of the number of people doing surveys at a level not lower than 0.5% per month.

Name: People_doing_surveys

Value expression:

[Measures].[Performance Evaluation Count]

Goal expression:

(KPIVALUE("People_doing_surveys"), ParallelPeriod([Date].[Day Hierarchy].[Month], 1, [Date].[Day Hierarchy].CurrentMember))*1.005

Status expression:
IIF(KPIVALUE("People_doing_surveys")>KPIGOAL("People_doing_surveys"), 1, -1)

Trend expression:

IIF(KPIVALUE("People_doing_surveys")>(KPIVALUE("People_doing_surveys"), ParallelPeriod([Date].[Day Hierarchy].[Month],1,[Date].[Day Hierarchy].CurrentMember)),1,-1)

b. Rising trend for average satisfaction rate at 0.3 per month.

Name: Average_satisfaction_KPI"

Value expression:

[Measures].[Average Satisfaction]

Goal expression:

(KPIVALUE("Average_satisfaction_KPI"), ParallelPeriod([Date].[Day Hierarchy].[Month], 1,[Date].[Day Hierarchy].CurrentMember))+0.3

Status expression:

IIF(KPIVALUE("Average_satisfaction_KPI")>KPIGOAL("Average_satisfaction_KPI"), 1, -1)

Trend expression:

IIF(KPIVALUE("Average_satisfaction_KPI")>(KPIVALUE("Average_satisfaction_KPI"), ParallelPeriod([Date].[Day Hierarchy].[Month],1,[Date].[Day Hierarchy].CurrentMember)),1,-1)

2. Analytical problems queries

a. What is the effect of performers and designers on rating of performance?

1. Compare the satisfaction rating relating to the designer of the performance.

2. Compare cleanliness ratings depending on species of animals performing in them.

3. Analyze if there is any correlation with the year the performers started working at and the average satisfaction rating for the performances they partook in.

4. Compare the satisfaction rating of the performances between different performers.

5. Analyze the average cleanliness and satisfaction rating for each performer (people and animals).

6. Compare the performers, seeing if they excel in specific types of performances - that are not already listed as their specialization.

b. What influences the number of people doing the surveys?

1. Analyze the relationship between the type of ticket (VIP, normal, reduced) and survey participation.

2. Analyze whether types of performances with great reputations (higher ratio of the satisfied ratings) have higher participation rates compared to the performances with worse reputation.

3. Compare whether the time of day the performance takes place affects the survey participation rate.

4. Identify whether the uniqueness of certain events motivates visitors to provide feedback. 5. Analyze survey participation based on where the audience is sitting.

6. Compare the number of people participating in the surveys depending on the species of the animal performing.

7. Analyze whether good circus maintenance (cleanliness, greater audience satisfaction) influences participation in surveys.