**KPI definitions**

1. **Zmniejszenie średniego czasu przyjazdu na interwencje o 6 minut w skali miesiąca**

**Name:**

KPI\_1\_avg\_time\_since\_notification

**Value expression:**

[Measures].[Q1avg\_time\_since\_notification]

**Goal expression:**

( KPIValue( "KPI\_1\_avg\_time\_since\_notification" ), ParallelPeriod ([Date].[date\_of\_intervention].[Month],1,[Date].[date\_of\_intervention].CurrentMember )) -6

**Status expression:**

IIf (KPIVALUE( "KPI\_1\_avg\_time\_since\_notification" ) < KPIGoal("KPI\_1\_avg\_time\_since\_notification"), 1, -1)

**Trend expression:**

IIf ( KPIValue( "KPI\_1\_avg\_time\_since\_notification" ) < ( KPIValue("KPI\_1\_avg\_time\_since\_notification" ), ParallelPeriod (

[Date].[date\_of\_intervention].[Month], 1,

[Date].[date\_of\_intervention].CurrentMember ) ), 1, -1)

1. **Zmniejszenie kosztu awarii o 2 procent w skali miesiąca**

**Name:**

KPI\_2\_avg\_insp\_cost

**Value expression:**

[Measures].[Q7\_sum\_cost\_inspcetion]

**Goal expression:**

( KPIValue( "KPI\_2\_avg\_insp\_cost" ), ParallelPeriod ([Date].[date\_of\_intervention].[Month],1,[Date].[date\_of\_intervention].CurrentMember )) \* 0.98

**Status expression:**

IIf (KPIVALUE( "KPI\_2\_avg\_insp\_cost" ) < KPIGoal("KPI\_2\_avg\_insp\_cost"), 1, -1)

**Trend expression:**

IIf ( KPIValue( "KPI\_2\_avg\_insp\_cost" ) < ( KPIValue("KPI\_2\_avg\_insp\_cost" ), ParallelPeriod ([Date].[date\_of\_intervention].[Month], 1,[Date].[date\_of\_intervention].CurrentMember ) ), 1, -1)

**1. Zbadaj jaki jest średni czas wyruszenia ekipy z pomorskich placówek straży**

SELECT NON EMPTY { [Measures].[Q1avg\_time\_since\_notification] } ON COLUMNS,

NON EMPTY { ([Id Facility Location].[Region].[Region].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Id Facility Location].[Region].[All] } )

ON COLUMNS FROM [DW Fire Police Vsmall])

2.  **Zbadaj ilość krytycznych wad pojazdów w regionie Pomorza przez ostatnie pół roku (pojazd niesprawny - fault severity=10)**

SELECT NON EMPTY { [Measures].[Q8\_number\_of\_inspections] }

ON COLUMNS, NON EMPTY { ([Id Facility Location].[Region].[Region].ALLMEMBERS \* [Date].[Year].[Year].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Id Facility Location].[Region].&[dolnoslaskie] } ) ON COLUMNS FROM ( SELECT ( { [Date].[Year].&[2001], [Date].[Year].&[2000] } ) ON COLUMNS FROM [DW Fire Police Vsmall]))

**3. Zbadaj sumaryczną ilość interwencji wszystkich drużyn w ostatnie pół roku i porównaj do poprzedniego roku.**

SELECT NON EMPTY { [Measures].[Q5\_number\_of\_interventions] } ON COLUMNS,

NON EMPTY { ([Id Facility Location].[Region].[Region].ALLMEMBERS \* [Date].[date\_of\_intervention].[Year].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Date].[Year].&[2000], [Date].[Year].&[2001] } )

ON COLUMNS FROM ( SELECT ( { [Id Facility Location].[Region].&[dolnoslaskie] } ) ON COLUMNS FROM [DW Fire Police Vsmall])) WHERE ( [Date].[Year].CurrentMember )

**4.Zbadaj średni czas trwania przejazdu (interwencji) w rejonie Pomorza w ostatnie pół roku i porównaj do poprzedniego roku. Wynik podaj w godzinach (calculated member)**

WITH MEMBER [MEASURES].[AVG\_INTER\_TIME\_HOURS] AS ' [Measures].[Q4\_avg\_intervention\_time] /60'

SELECT NON EMPTY { [Measures].[Q4\_avg\_intervention\_time], [MEASURES].[AVG\_INTER\_TIME\_HOURS] } ON COLUMNS,

NON EMPTY { ([Id Facility Location].[Region].[Region].ALLMEMBERS \* [Date].[Year].[Year].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Date].[Year].&[2000], [Date].[Year].&[2001] } )

ON COLUMNS FROM ( SELECT ( { [Id Facility Location].[Region].&[dolnoslaskie] } )

ON COLUMNS FROM [DW Fire Police Vsmall]))

**5. Które modele wozów miały najwięcej wyjazdów w ciągu ostatnich 5 lat?**

SELECT NON EMPTY { [Measures].[Q3\_number\_of\_interventions] } ON COLUMNS,

NON EMPTY { ([Vehicle].[Model].[Model].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Date].[date\_of\_intervention].[Year].&[2000], [Date].[date\_of\_intervention].[Year].&[2001], [Date].[date\_of\_intervention].[Year].&[2002], [Date].[date\_of\_intervention].[Year].&[2003], [Date].[date\_of\_intervention].[Year].&[2005], [Date].[date\_of\_intervention].[Year].&[2004] } ) ON COLUMNS FROM ( SELECT ( { [Id Facility Location].[Region].&[dolnoslaskie] } ) ON COLUMNS

FROM ( SELECT ( { [Vehicle].[Model].[All] } ) ON COLUMNS FROM [DW Fire Police Vsmall]))) WHERE ( [Id Facility Location].[Region].&[dolnoslaskie], [Date].[date\_of\_intervention].CurrentMember )

**6. Zbadaj w których modelach wozów strażackich wystąpiły krytyczne wady przez ostatnie pół roku (pojazd niesprawny - fault severity=10)**

SELECT NON EMPTY { [Measures].[Q8\_number\_of\_inspections] } ON COLUMNS, NON EMPTY { ([Vehicle].[Model].[Model].ALLMEMBERS ) } ON ROWS FROM ( SELECT ( { [Date].[Month].&[9], [Date].[Month].&[8], [Date].[Month].&[7], [Date].[Month].&[12], [Date].[Month].&[11], [Date].[Month].&[10] } )

ON COLUMNS FROM ( SELECT ( { [Date].[Year].&[2001] } ) ON COLUMNS FROM ( SELECT ( { [Fault].[Fault Severity].&[CRITICAL] } ) ON COLUMNS FROM [DW Fire Police Vsmall]))) WHERE ( [Fault].[Fault Severity].&[CRITICAL], [Date].[Year].&[2001], [Date].[Month].CurrentMember )

**7. Zbadaj które modele wozów strażackich, były w naprawie w ciągu ostatniego półrocza**

SELECT NON EMPTY { [Measures].[Q8\_number\_of\_inspections] } ON COLUMNS,

NON EMPTY { ([Date].[Year].[Year].ALLMEMBERS \* [Vehicle].[Model].[Model].ALLMEMBERS ) } ON ROWS FROM (SELECT ( { [Date].[Month].&[12], [Date].[Month].&[11], [Date].[Month].&[10], [Date].[Month].&[9], [Date].[Month].&[8], [Date].[Month].&[7] } ) ON COLUMNS FROM ( SELECT ( { [Date].[Year].&[2001] } ) ON COLUMNS FROM

( SELECT ( { [Fault].[Fault Severity].[All] } ) ON COLUMNS FROM [DW Fire Police Vsmall]))) WHERE ( [Fault].[Fault Severity].[All], [Date].[Month].CurrentMember )

**8. Jak często w ciągu ostatnich 5 lat dany model wozu bywał u**

**mechanika w bardzo ciężkim stanie (fault\_severity >= HIGH)?**

SELECT NON EMPTY { [Measures].[Q8\_number\_of\_inspections] }

ON COLUMNS, NON EMPTY { ([Date].[Year].[Year].ALLMEMBERS \* [Vehicle].[Model].[Model].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Fault].[Fault Severity].&[CRITICAL], [Fault].[Fault Severity].&[HIGH] } )

ON COLUMNS FROM ( SELECT ( { [Date].[Year].&[2001], [Date].[Year].&[2002],

[Date].[Year].&[2003], [Date].[Year].&[2000], [Date].[Year].&[2004], [Date].[Year].&[2005] } )

ON COLUMNS FROM [DW Fire Police Vsmall])) WHERE ( [Fault].[Fault Severity].CurrentMember )

**9. Zbadaj koszt(suma wszystkich napraw) naprawy w zależności od modelu dla wozów z rocznika 2010+(pojazdy NEW). Wynik podaj w tysiącach (calculated member)**

WITH MEMBER [MEASURES].[COST\_IN\_THOUSANDS] AS ' [Measures].[Q7\_sum\_cost\_inspcetion] /1000'

SELECT NON EMPTY { [Measures].[Q7\_sum\_cost\_inspcetion], [MEASURES].[COST\_IN\_THOUSANDS] } ON COLUMNS,

NON EMPTY { ([Vehicle].[Model].[Model].ALLMEMBERS ) }

ON ROWS FROM ( SELECT ( { [Id Facility Location].[Region].&[dolnoslaskie] } ) ON COLUMNS FROM ( SELECT ( { [Vehicle].[How Old].&[NEW] } ) ON COLUMNS

FROM ( SELECT ( { [Vehicle].[Model].[All] } ) ON COLUMNS FROM [DW Fire Police Vsmall]))) WHERE ( [Vehicle].[How Old].&[NEW], [Id Facility Location].[Region].&[dolnoslaskie] )

**10. Zbadaj jakiej wielkości wozy strażackie były najczęściej używane podczas interwencji przez ostatnie 5 lat**

SELECT NON EMPTY { [Measures].[Q3\_number\_of\_interventions] } ON COLUMNS,

NON EMPTY { ([Vehicle].[Size].[Size].ALLMEMBERS ) } ON ROWS FROM

( SELECT ( { [Date].[Year].&[2001], [Date].[Year].&[2000],

[Date].[Year].&[2003], [Date].[Year].&[2002], [Date].[Year].&[2004] } )

ON COLUMNS FROM [DW Fire Police Vsmall])

WHERE ( [Date].[Year].CurrentMember )

**11. Podaj 3 regiony w których było najwięcej ludzi, którzy ucierpieli w roku 2001**

**(TopCount)**

SELECT NON EMPTY { [Measures].[Number Of Impacted People] } ON COLUMNS, NON EMPTY

{TopCount([Id Departure Location].[Region].[Region].ALLMEMBERS,3, [Measures].[Number Of Impacted People] ) }

ON ROWS

FROM ( SELECT ( { [Date].[date\_of\_intervention].[Year].&[2001] } )

ON COLUMNS FROM [DW Fire Police Vsmall]) WHERE ( [Date].[date\_of\_intervention].[Year].&[2001] )

**12. Podaj 5 regionów w których było najmniej śmierci ludzi w roku 2001**

**(BottomCount)**

SELECT NON EMPTY { [Measures].[Number Of Dead People] } ON COLUMNS, NON EMPTY

{BottomCount([Id Departure Location].[Region].[Region].ALLMEMBERS,5, [Measures].[Number Of Dead People] ) }

ON ROWS

FROM ( SELECT ( { [Date].[date\_of\_intervention].[Year].&[2001] } )

ON COLUMNS FROM [DW Fire Police Vsmall]) WHERE ( [Date].[date\_of\_intervention].[Year].&[2001] )