ification of possible metrics that Caltrans might use to measure prosperity, accessibility, and livability ...

- Tying data to goals, are we trying to affect change, or simply monitoring?
- SANDAG’s 1990 -2008 Prosperity Measures
- SANDAG’s 2016 Prosperity Measure
... It is a capital mistake to theorize before one has data.

Insensibility one begins to twist facts to suit theories, instead of theories to suit facts.

Sir Arthur Conan Doyle
70-80% of BI projects fail (Gartner)

Characteristics of companies with Best in Class BI implementations...

They use data to affect change and drive better business decisions, instead of collecting data and simply reporting on it.
Tying data to Goals

(Prosperity)Goals

Data Sources
Tying data to Goals

Have we solved the problem?
Or exacerbated it?

Data Sources
Tying data to Goals

(Prosperity) Goals

Have we solved the problem? Or exacerbated it?

Data Sources
San Diego Regional Economic Prosperity Strategy

- 10 Strategic goals
- 27 Recommendations
- Include different aspects of the economy
  - Water, Energy, Land Use, Housing, Education, Border region –
- Transportation related goal
  - “Produce a goods movement strategy for the San Diego Region to improve our capability to participate in international trade and help increase mobility for the regions residents”
4 Indicator Groups

18 Categories of Variables

Questions being answered

- How well is the region performing?
- How well are the businesses in the region faring?
- What resources are available to support the region’s future economic and social well being?
- What is the capacity of the region’s infrastructure to ensure its economic and social well being in the future?
STRATEGIC PROSPERITY ASSESSMENTS SYSTEM

- Indicator Group 1 - Economic and Social Performance
- Indicator Group 2 - Business Vitality
- Indicator Group 3 - Resources for Economic Growth
- Indicator Group 4 - Regional Infrastructure Capacity
STRATEGIC PROSPERITY ASSESSMENTS SYSTEM

Indicator Group 1 - Economic and Social Performance
  o Population
  o Employment
  o Wages
  o Income
  o Average Wage
  o Cost of Living
STRATEGIC PROSPERITY ASSESSMENTS SYSTEM

Indicator Group 2 - Business Vitality
- Gross Regional Product
- Job Quality
- Traded Clusters (Engines of Economic Growth)
- International Trade and Goods Movement
- Minority and Women Owned Businesses
- Venture Capital
STRATEGIC PROSPERITY ASSESSMENTS SYSTEM

Indicator Group 3 - Resources for Economic Growth
- Education
- Housing
STRATEGIC PROSPERITY ASSESSMENTS SYSTEM

Indicator Group 4 - Regional Infrastructure Capacity

- Freeways
- International Land Ports of Entry
- Airports
- Energy
RECAP OF THE 2008 PROSPERITY STRATEGY

10 Goals
27 Recommendations

4 Indicator Categories
18 Categories of Variables
100’s of Variables
Tying data to metrics

1. Data Sources
2. Business Processes
3. Departmental Metrics (PI’s and RI’s)
4. “Program Level” KPIs and KRI’s
5. Critical Success Factors
6. (Prosperity) Goals

Diagram shows the hierarchy from data sources to goals.
Private Sector, tying goals to data to metrics

**Goals**
- Increase customer retention rate

**Critical Success Factors**
- Improve customer service

**Corporate KPIs and KRI’s**
- Monthly customer churn rate
  - Faster problem solving
  - More Information online
  - Less Phone wait
  - Target 24 hrs for resolution
  - 20% per month for 5 months
  - 2 minute average wait time

**Departmental Metrics**
- Calculation from the CRM
- Requires an inventory and plan
- Intercept Phone System data

**Business Processes**

**Data Sources**

**Private Sector, tying goals to data to metrics**
2016 Prosperity Strategy

“Produce a goods movement strategy for the San Diego Region to improve our capability to participate in international trade and help increase mobility for the region’s residents”

- **Strategic Goal**: Improve Regional Transportation
  - Build light rail line from Downtown to UCSD
  - Add managed lanes in key corridors
- **Critical Success Factors**
- **KPIs and KRI’s** (indicator groups)
- **Departmental Metrics** (supporting metrics)
  - Ridership on route XXX
  - Fare box recovery rates
  - Ridership data
  - Fairbox collections
- **Business Processes**
  - Process Owner: MTS
    - Trolley/Bus administrator
- **Data Sources**
PROSPERITY 2016

- Continued monitoring comparing “Us” to “Peers”
- Continued collection of a reduced set of indicators (Continuity)

Addition of:
- Holistic Composite Metric (Genuine Progress Indicator)
- Tie Metrics to Goals, attempt to define “process owner”
- Regular updates (Annual)
- Responsible Parties (those that can influence outcome) (Identify)
A more holistic view of prosperity

- Economic
- Social
- Environmental
PEOPLE “FEEL” GPI

GDP vs GPI

Composition of GPI

For additional information on the Social Indicators:
https://www.ted.com/talks/michael_green_what_the_social_progress_index_can_reveal_about_your_country
## Economic Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Methodology</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Per capita income</strong></td>
<td>Base value, ACS income data (so that it is consistent with other SANDAG estimates and forecasts)</td>
<td>SANDAG, ACS</td>
</tr>
<tr>
<td><strong>B: Income distribution</strong></td>
<td>Negative or positive, (Gini coefficient in year times 100)/(base year [1970] Gini coefficient)</td>
<td>Data available for all years for all three levels. SANDAG, ACS</td>
</tr>
<tr>
<td><strong>C: Personal income adj. for income inequality</strong></td>
<td>Adjusted base value, (Column A/column B)*100</td>
<td>Calculated SANDAG</td>
</tr>
<tr>
<td><strong>Cost of underemployment</strong></td>
<td>Negative, (Total number of underemployed persons) (unprovided hours per constrained worker (Leete-Guy and Schor, 1992)) (average hourly wage rate)</td>
<td>No. of underemployed persons calculated using a data from BLS and Schor (1997) using a quadratic equation to est. underemployment rate from unemployment rate. Unprovided hours used data from Leete-Guy and Schor (1992). Average hourly wage: see column E BLS</td>
</tr>
<tr>
<td><strong>Venture capital investment</strong></td>
<td>Positive or negative</td>
<td>PWC</td>
</tr>
<tr>
<td><strong>Cost of living</strong></td>
<td>Negative</td>
<td>Consumer Price Index?</td>
</tr>
<tr>
<td>Environmental Indicators</td>
<td>Impact</td>
<td>Source</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>----------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Cost of water pollution</td>
<td>Negative</td>
<td>Keith</td>
</tr>
<tr>
<td>Cost of air pollution</td>
<td>Negative</td>
<td>SANDAG Air Quality Index (Rachel)</td>
</tr>
<tr>
<td>Loss of wetlands (might be a subgroup for habitat)</td>
<td>Negative</td>
<td>SANDAG (Keith and grace)</td>
</tr>
<tr>
<td>Loss of farmland</td>
<td>Negative</td>
<td>SANDAG (Keith and grace)</td>
</tr>
<tr>
<td>Loss of habitat</td>
<td>Negative</td>
<td>SANDAG (Keith and grace)</td>
</tr>
<tr>
<td>Habitat Restored</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
<td>Brownfield Remediation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of greenhouse gas emission</td>
<td>Negative</td>
<td>SANDAG (Regional Plan)</td>
</tr>
<tr>
<td>Beach erosion</td>
<td>Negative</td>
<td>SANDAG (Sarah)</td>
</tr>
<tr>
<td>Moving from non-renewable to renewable resources</td>
<td>Positive</td>
<td>SANDAG (Allison Wood)</td>
</tr>
<tr>
<td>Social Indicators</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Cost of family breakdown</strong></td>
<td>Cost of divorce: no. of divorces in VT (Census Bureau). Cost est. at US$8922/divorce plus US$13,380/child. Est. 0.89 children per divorce. Scaled VT est. by pop. for CC and BT.</td>
<td></td>
</tr>
<tr>
<td><strong>Overcrowding: % of people in substandard housing and homeless</strong></td>
<td>(Cost of divorce) + (social cost of television viewing)</td>
<td></td>
</tr>
<tr>
<td><strong>Cost of crime</strong></td>
<td>Average cost per crime estimated by dividing value of stolen property (Vermont Center for Justice Research, 2001) by no. of property crimes (FBI, 2000). This cost was multiplied by the no. of property crimes in 1950–2000</td>
<td></td>
</tr>
<tr>
<td><strong>Value of higher education</strong></td>
<td>Proportion of people who have higher education and who don't. Combine it with the wage differential.</td>
<td></td>
</tr>
<tr>
<td><strong>Access to high frequency transit, transit stops, bike facilities, retail and recreational activities, healthcare etc</strong></td>
<td>How to monetize?</td>
<td></td>
</tr>
<tr>
<td><strong>Cost of automobile accidents</strong></td>
<td>No. of fatalities from automobile accidents (National Safety Council) times cost of all motor vehicle crashes on a per death basis—US$4.68 million (National Safety Council)</td>
<td></td>
</tr>
<tr>
<td><strong>Variable to account for social justice - jobs and housing balance, Transportation and housing cost index</strong></td>
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<tr>
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<tr>
<td><strong>Access to education and jobs in 30 minutes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Literacy or English Proficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost of commuting</strong></td>
<td>Negative</td>
<td>(Direct costs for vehicle purchase and maintenance) + (cost of public trans.) + (indirect cost for lost time)</td>
</tr>
</tbody>
</table>