

The background features a light gray circuit board pattern with black lines and circular components. A dark horizontal band runs across the middle of the image, serving as a backdrop for the text.

# DATA 2015

Monterey County Department of Social Services – Data Development Unit

Mike Borgeson – Department Information Systems Manager

Arthur Lomboy – BI Data Development Manager

Umar Alhadi – Data Analyst II

Noel Salas – Data Analyst I

# Profile of the County of Monterey



- Monterey County, California – Population = 433,409+
- Two distinct sub-regions
  - Monterey Peninsula - World famous 100 mile coastline, seafood and golf!
  - Salinas Valley – World’s major producer of vegetables
- 12 incorporated cities - Carmel-by-the-Sea, Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Salinas, Sand City, Seaside, Soledad and Pacific Grove.
- 14 unincorporated cities – Aromas, Big Sur, Bradley, Carmel Valley, Castroville, Chualar, Jolon, King City, Lockwood, Moss Landing, Pebble Beach, San Ardo, Spreckels and Watsonville
- 3,300 square miles covering 468,538 total acres

# Monterey County- Department of Social Services (DSS)

- Administers over seventy programs that daily serve an estimated 150,000 residents of Monterey County
- 5 Branch offices
- 785 Employees, 868 Allocated
- Major Programs
  - Community Benefits (SAWS)
  - CalWorks Employment Services
  - Aging and Adult Services
  - Military and Veterans Affairs Office
  - Family and Children's Services



# DATA 2002

## How did we start?

- 1 Statistician
- 1 Data Analyst
- Tools:
  - Excel – Forecasting, Program Caseload Management
  - Business Objects – State hosted child welfare data warehouse
- Knowledge Base:
  - Program
  - Statistics
  - Ad-hoc reporting



# DATA 2003

## Key Indicators Project

- Key Indicators Report – Data report describing all our major programs
  - Vision of the Director of Social Services, Elliott Robinson - “To better understand our community and how the Department of Social Services is working towards a better future for all...”
    - Lead by Executive Management and Program Managers
    - Developed data gathering processes and creation of narratives based on data
    - Data comprised of canned and ad-hoc based reports
    - Precursory for the need for interactive dashboard reporting
- New reporting tool and training
  - SAS
    - Development and understanding of longitudinal datasets
    - Refined forecasting ability
    - 50+ monthly ad-hoc based production reports



# DATA 2004

## More reporting and data needs

- AB636 - Participation in State workgroups on child welfare outcomes
  - Comprehensive development of report methodologies
  - Reports based on SAS
  - State Business Objects solution inefficient for use in creating CFSR outcomes
  - CHDP based case-level reports are shared/developed with Monterey County Health Department Nursing staff
- ISAWS Data Cleanup
  - Mapper Data – Ad-hoc database structure was not in a traditional relational database structure
  - Basically one primary key used throughout 40 derived tables
- Creation of Report/Data Request form
  - Standardizing requests for reports and data – Organizational Change Management
  - Transforming a request into a methodology, working with requester to define:
    - Report denominator and numerator definitions

# DATA 2005

## Where can we store our data?

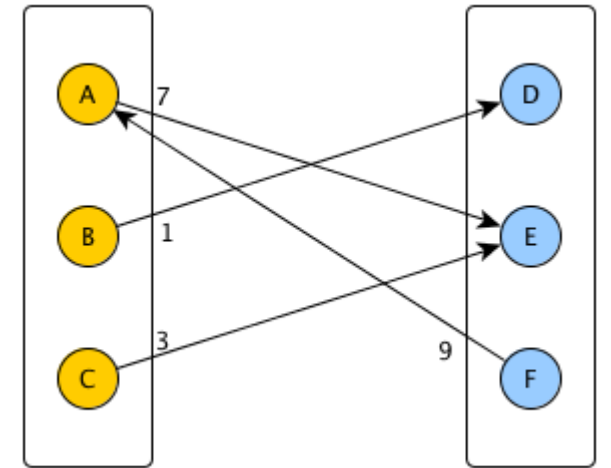
- SAS BI Server – Data storage warehouse and reporting. Purchased by DSS and Monterey County Health Department.
  - Start of Java based interactive reporting – First attempt to automate Key Indicators reports
  - Standard version – met basic needs
  - Advanced SAS training
  - Server is shared with county Health Department
  - Some sharing of data between DSS and Health Department. Case level finance based service oriented analyses.
  - Started using SAS on IBM S360 mainframe – extracting raw tables from State child welfare database for custom reporting and SAS based data warehousing
  - SAS ETL (Extract Transfer & Load) processes established to Microsoft SQL Server.
- Hired Information Systems Coordinator - Manual monthly report run (80+ reports) , begin cross-training, transfer of knowledge, Key Indicators report coordination
- Data projects
  - Key Indicators Project – ongoing manual process, MS Publisher used to manage/produce report
  - Differential Response (DR) development
    - Random referral review of re-reports
    - DR database development and reporting
    - Data matching against child welfare data warehouse and third party DR database/application
- GIS
  - Basic maps showing where customers reside



# DATA 2006-2007

## Matching clients across programs

- First experience with sharing data was internal
- CWS/CMS with ISAWS and CMIPS.
- IHSS Providers receiving CalWORKs
- CWS ISAWS matches? When first done there was concern about confidentiality. Matches were specifically to compare systems to ensure data integrity.
- Developing understanding for Master Data Management (MDM) tools
- County struggling to define need for county based MDM system
- DSS and Health Department on board with need to share electronic data







## DATA 2008-2009

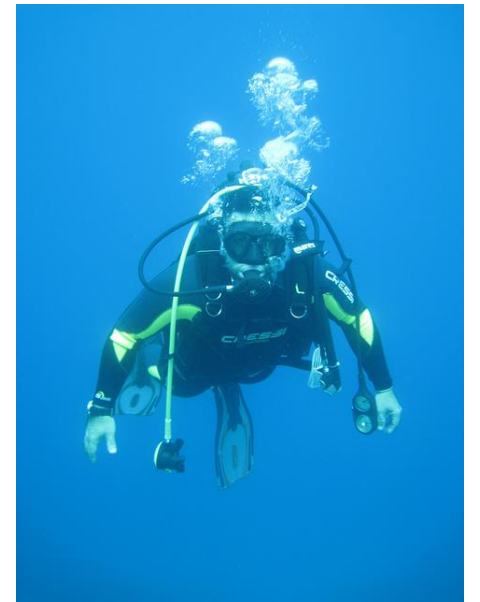
# Researching New BI and Data Warehousing Tools

- Decision made to standardize on Microsoft SQL Server 2005 - BI and Reporting Services
- ISAWS to C-IV conversion caused issues for moving forward, but opened up vistas in Oracle.
- Microsoft SQL Server 2005 - Training early 2008... by late 2009 decision made to move to Oracle
  - BI and reporting services do not meet needs
  - Idea was to move away from SAS to strictly SQL
  - Trying to make report code portable; SAWS based report are focus for conversion to SQL programming
- Participation in Advanced Analytics for Child Welfare Administration – Chapin Hall and U.C. Berkeley
  - The how to on converting data into evidence that can be used to inform policy and practice decisions
  - Development of Event History and Survival Analyses
- Review AFCARS, NCANDS and CANS data structures and outcome measure reporting
- Successfully matched client-level data using DSS child welfare data warehouse against U.C. Berkeley's California Child Welfare Indicators Project (CCWIP) database/queries and Chapin Hall at the University of Chicago's Center for State Child Welfare Data (FCDA) database/queries

# DATA 2010-2011

## Diving deep with Oracle and other adventures

- Implementation of new SAWS system called CIV. CIV database resides in Oracle database. Decision made to move DSS data and reporting systems to Oracle.
- Oracle - SQL centered, plus BI Publisher and OBIEE!
  - Converted all ISAWS reports from SAS to SQL
    - Reports retain same methodologies but , completely different database structure
  - Oracle training – OBIEE (Oracle Business Intelligence Enterprise Edition – Standard)
  - First OBIEE prototype completed
  - Revisit Master Data Management needs
  - Key indicators information converted to interactive reports in Oracle APEX 4.01!
- Forecasting, statistical analyses and child welfare data and reporting systems remain on SAS
  - SAS ETL (Extract Transfer & Load) processes established to Oracle and Microsoft SQL Server BI systems.
- R statistical software reviewed for integration
- Office of Employment and Training
  - Reporting and data needs become responsibility of Data Development unit
  - New program/system/database – Microsoft SQL Server based reporting system



# DATA 2012-2013

## Partnering with County Departments

- Oracle OBIEE system needs to be upgraded to enterprise version. Upgrade allows unlimited access to reporting system and tools. Current system allows 25 dedicated users. Upgrade would allow use by nearly all county departments.
- IBM MDM tools and the Oracle upgrade are oriented around a grant to implement Assembly Bill 109 (AB109). AB109 allows for current non-violent, non-serious, and non-sex offenders, who after they are released from California State prison, are to be supervised at the local County level. Instead of reporting to state parole officers, these offenders are to report to local county probation officers.
  - Initial meetings included Social Services, Probation, Sheriffs and Health departments.
  - Project was sidelined based on advice by county legal counsel
  - Developed reports with Probation on cross services on general aid and social services
  - CFSR based management reports are created for Juvenile Probation
- CalWORKs and child welfare data sharing with California State Monterey Bay, College of Health and Human Services – Advancing our human services analytical ability – PII data masked by using application Primary Keys
- ViaCare (CoveredCA) – Developed program with county owned Natividad Medical Center on expanding insurance coverage for low-income uninsured adults. The launching of ViaCare provided Monterey County with federal reimbursement for expanding coverage to low-income, uninsured residents. Developed daily data transfer of SAWS data to ViaCare computer system for coverage verification. 3,849 county residents benefitted from program.
- WAMS (Work Assignment Management System).
  - Developed by DSS and County IT Department to support Process Based operations vs regular caseload carrying worker
  - MS SQL Reporting Services with browser based MS Access frontend



# DATA 2014

## Back to Microsoft!

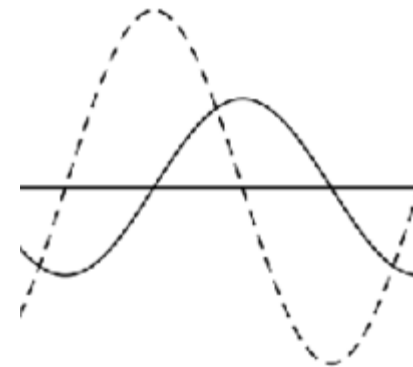
- Decision made to not to upgrade Oracle and return to county ITD's preferred vendor Microsoft.
- SQL Server 2012 – Improved reporting and Master Data System (MDM)
- SharePoint 2013 – New BI tools
- Converted Oracle BI Publisher and APEX to SQL Server Reporting Services
- Fourth person hired into unit. Data Analyst I - Reviews automated monthly report run (200+ reports) and receives training on report development
- DATS (DSS Application Tracking System)
  - DSS internally developed application and reporting system
  - Tracks all applications that enter DSS
  - Perpetual BI reporting system based on MS SQL Server and C Sharp programming language



# DATA 2015

## DSS Data Development Unit

- 4 full time employees dedicated to data analysis and reporting
- Over 200+ automated ad-hoc based production reports produced monthly
- Statistical Analyses
  - Forecasting
  - Event History and Survival Analyses
  - Regression Analyses
- Program Development
  - Program Trends
  - Caseload Trends
  - Data Matching Across Programs
- Business Intelligence
- Application Development



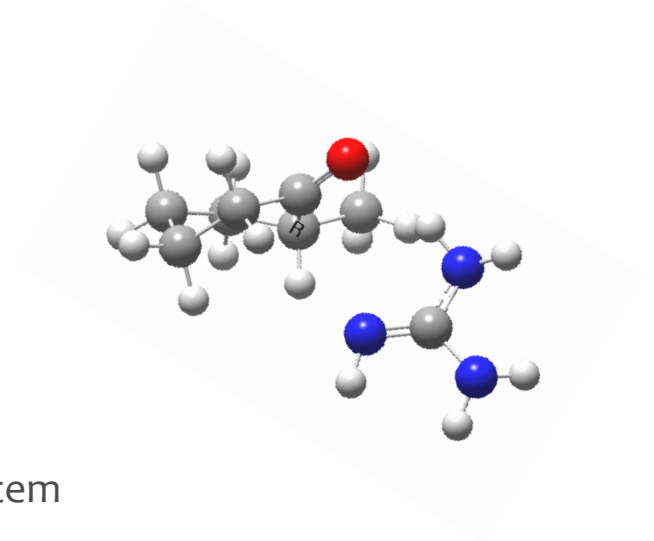
# DSS Data Initiatives

- Currently under review IBM Identity and BI reporting systems in partnership with Monterey County Health Department.
- Data sharing projects with Monterey County Health Department
  - Free the Data
  - Bright Futures
  - Impact Monterey County
  - CHDP reporting
  - System of Care (SAMSHA) - general population matching
    - First5
    - Probation
    - Behavioral Health
      - Client level data matching with ICD9 codes by services received and costs
- Data sharing with Monterey County Probation Department
  - Cross Services
  - Database development

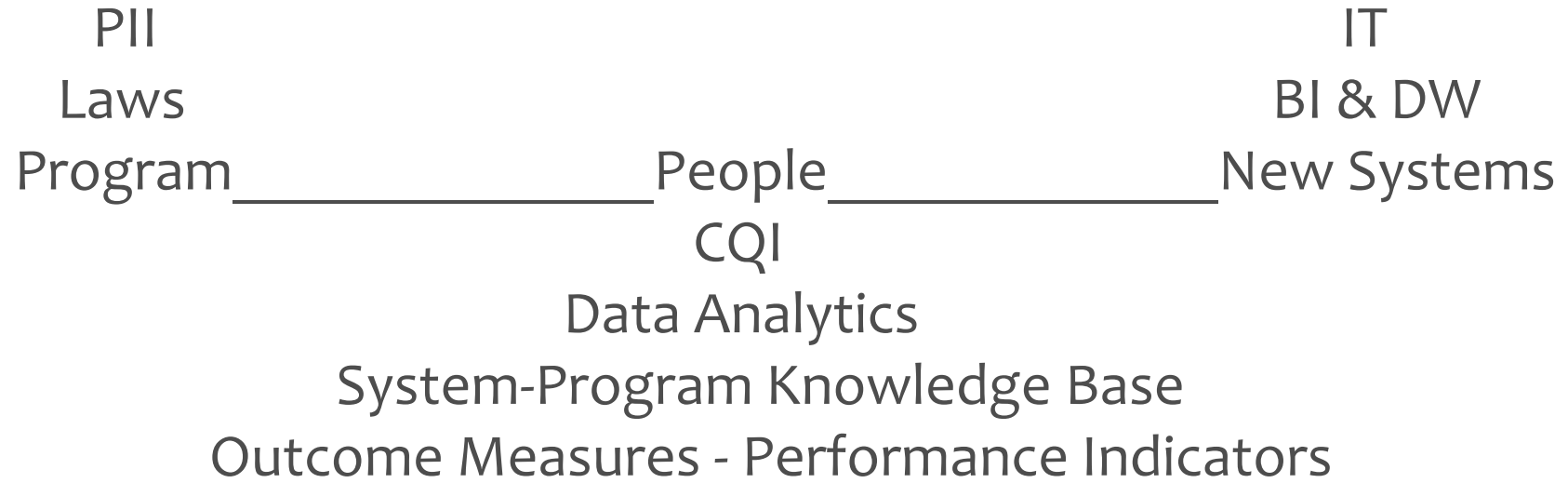


# DSS Data Initiatives - continued

- DSS Child Welfare
  - Foster Focus
  - iFoster
  - CFSR 3
  - CWS-NS
    - RFP review of new SACWIS based child welfare case management system
- DSS GIS – Developing deeper GIS analytics
- California State Monterey Bay, College of Health and Human Services
  - Continued development of human services analytical ability
- California Department of Social Services – Research Services Branch
  - Pilot CalFresh Outreach project using GIS
- Public Access Ordinance
  - Receiving more requests for data



# Balancing Horizontal Integration Efforts



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