ADVANCING ANALYTICS AT ROSENDIN

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ABOUT ROSENDIN

Established in 1919, Rosendin remains proud of our **more than 100 years** of building quality **electrical and communications installations and value** for our clients but, most importantly, for **building people** within our company and our communities.

Our customers lead some of the most complex construction projects in history and rely on us for our knowledge, ability to scale, and dedication to quality.

At Rosendin, we work to ensure that **everyone has the opportunity** to reach their full potential by building a culture that is **diverse, safe, welcoming, and inclusive**.

- Over 7,500 Employees
- Annual Revenue $3B+
- Offices Nationwide
- Employee-Owned
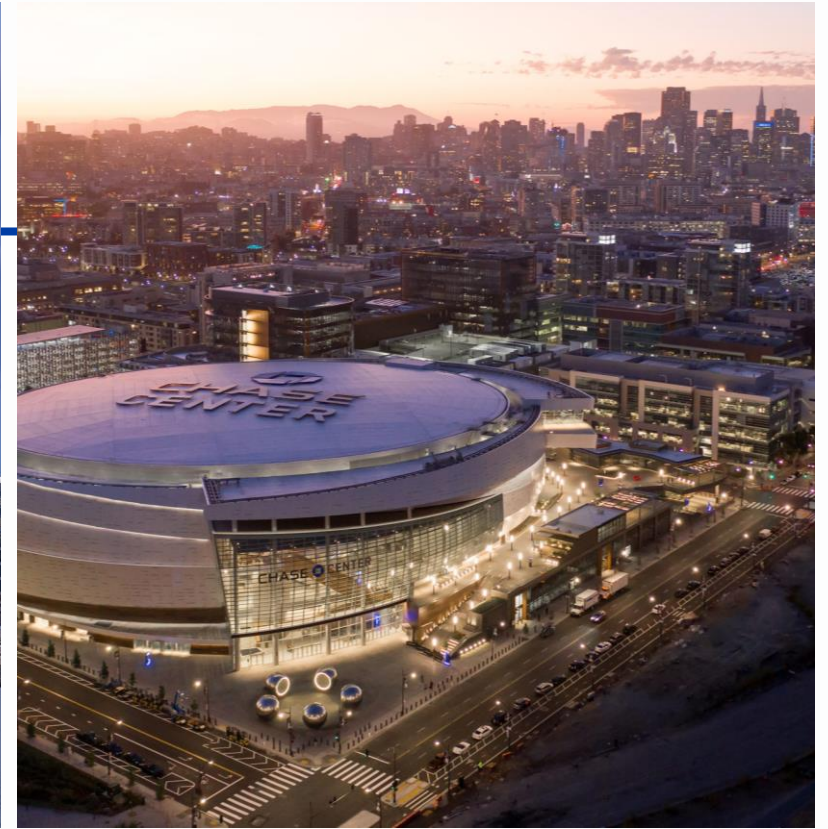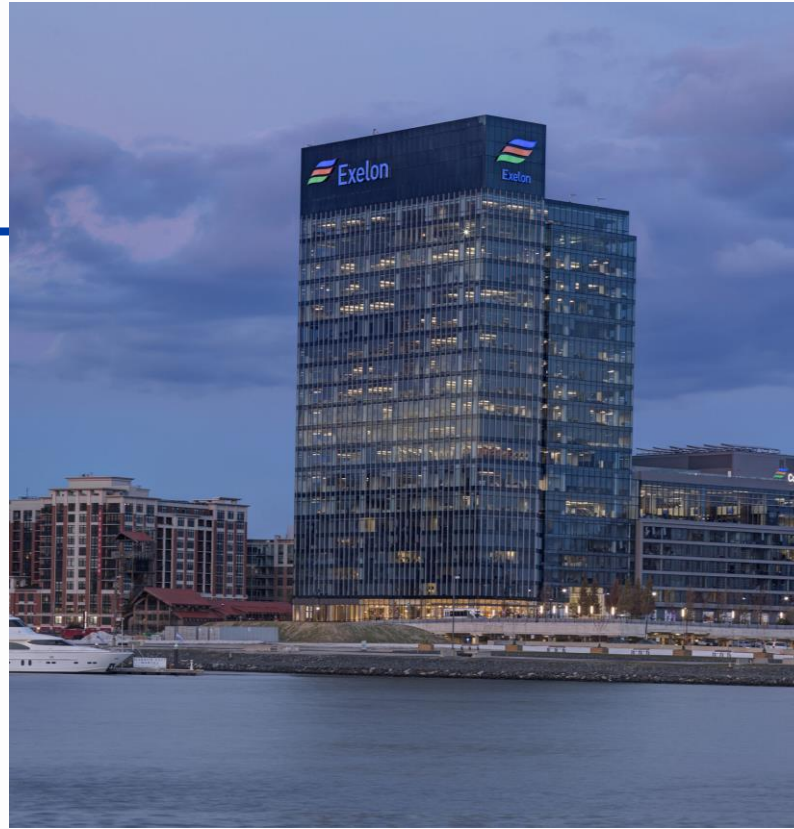
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WHAT WE BUILD

ROSENDIN

COMMITTED. CONNECTED. ENGAGED.

OUR MISSION

Building Quality. | Building Value. | Building People.®

Our customers lead some of the most complex construction projects in history and rely on us for knowledge, scalability, and quality. They value our partnership because they deserve a team as committed, connected, and engaged as they are. As the largest employee-owned company in our industry, we do what is needed for a successful job.

OUR VISION

Lead. Inspire. Build.

We believe the work we do should build our industry, empower our employees and inspire innovation.

OUR CORE VALUES

- **We Care.** We are an organization built on integrity. We create an environment that empowers people to work safely, be at their best, and respect one another.

- **We Listen.** Our success is based on hearing and understanding the objectives of our customers. We build relationships.

- **We Share.** We collaborate, inspire, and challenge one another.

- **We Innovate.** People will remember us for the solutions we provide. Entrepreneurial ideas are encouraged to continuously raise industry standards.

- **We Excel.** The quality of our work will represent us for years to come. We take pride in what we build. It is our legacy.

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ABOUT VLAMIS SOFTWARE SOLUTIONS

- Vlamis Software founded in 1992 in Kansas City, Missouri

- Developed 400+ Oracle BI and analytics systems

- Specializes in Oracle-based:

  - Enterprise Business Intelligence & Analytics

  - Analytic Warehousing

  - Machine Learning and Predictive Analytics

  - Data Visualization

  - ETL and data integration

- Multiple Oracle ACEs, consultants average 15+ years

- Creators of the Force Directed Graph Plugin on Oracle Analytics Library

- www.vlamis.com (blog, papers, newsletters, services)

- Co-authors of book "Data Visualization for OBI 11g"

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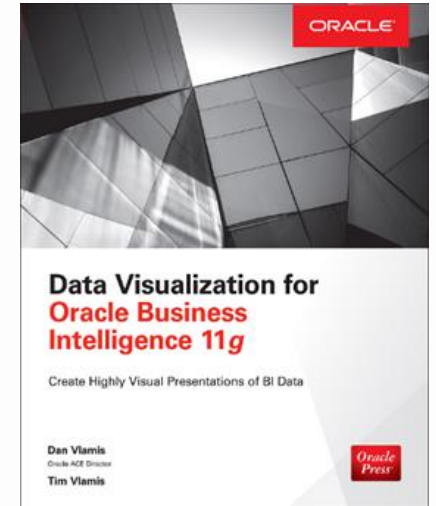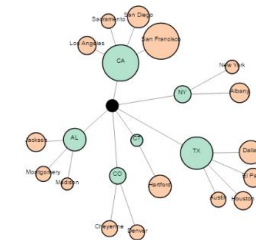
BACKGROUND

- Large legacy OBIEE system

- Had "Dashboards"

- Migrated OBIEE 11.1.1.7 to OAC

- Tried rebuilding data structure to increase load performance etc.

- Brought in revolving door of people who said they knew OAC, but only knew OBIEE

- Realized needed help, especially with integrating visuals and reorganizing/optimizing our data structure.

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MOTIVATIONS – CLOUD FIRST APPROACH

- Retire outdated technology

  - physical servers reaching end of life

- Improved overall performance of the system

  - dimension tables

  - remodeling of subject areas

- Redesigned dashboards to make more useful and interactive

- Used ad hoc DV capabilities of OAC

  - explore business data

  - develop new analytic insights

- Working to remove manual reporting process to automated DV processes.

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CURRENT TECHNOLOGY

- We are on cloud-based technology
- ADW
  - Faster
  - Less maintenance
  - Retire old hardware
  - Modified data model at same time
  - Now on cloud
- ODI
  - started using instead of Informatica at extra license cost
- OAC
  - Access to DV front end for new business cases
  - Better visualizations
- Not 100% autonomous – needs some looking after
- Dedicated resource that knows ADW is still helpful

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ROSENDIN NEEDS IN OCTOBER 2020

- We wanted to modernize analytics

- Get business to use the data regularly (be more modern)

- End users had lost confidence in data integrity, frustrated with load times, stakeholders irritated with long development times

- Asked Oracle sales rep for suggestion

"Find me someone that can do what you promised, or we are done."

Matt Lamb, Rosendin CIO

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WORKING WITH VLAMIS

- Rosendin had done other things with OAC
  - Focused on financial dashboards (from requests)
  - Majority of users of system are project managers
- Started with support contract to help Rosendin with OAC
  - Punch list items – 7 quick-hit items to get going
- Rebuilt Billings in OAC classic using OBIEE dashboards as a prototype
- Install Rate dashboard built in DV according to users' needs
  - Identified issue with monthly vs weekly data
- Evaluated structure of DW (ongoing)

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FINDINGS FROM VLAMIS OAC ASSESSMENT

- Vlamis assessed current OAC environment

- Evaluated on 6 C's: Content, Comparisons, Choice, Categorization, Connection, Context

- Redesign Executive KPI and other dashboards

  - Several UI suggestions

  - New comparison measurements

  - Additional graphs for specific analyses

- Move calculations into RPD, not in report logic

- Organize column names to make more useable

- Performance needs to be improved – lots of suggestions

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PERFORMANCE RECOMMENDATIONS

3.2.2.2 Project Details Dashboard Page

On the Project Details dashboard page, most of the analyses run in under 10 seconds except Labor Breakdown and Non-Labor Breakdown. Some general findings from our review were:

- The use of filters could impact performance. See the above recommendation on moving filters lower in the stack.
- Hard coded filters, like "PCO Line Details"."Status" NOT IN ('V', 'X', 'C', 'O') should be avoided. What happens if you need to add or delete a status code? We recommend possibly adding an attribute column, which you then could refer to in the RPD or analysis.
- Rosendin currently evaluates the user-to-project relationships at runtime through a reference to the multi-million row project security table. We believe we may be able to use one or more session variables to pre-assign the user-to-project relationships when the user signs in, and thereby improve the performance of reports that filter projects by user.

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VISUALIZATION RECOMMENDATIONS

RPD RECOMMENDATIONS

DEMO

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WHERE WE ARE TODAY

- Migrated to OAC
- ETL is now in ODI
- New ADW model
- Dashboards updated
- Starting to work with OAC DV
- Turned off OBIEE (Yesterday)
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WHERE WE ARE TODAY

- Migrated to OAC

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Turned off OBIEE 3/10/2023

Lead. Inspire. Build.

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BENEFITS

- Provided supervisors and managers access to on-demand weekly-level data
  - Enables them to properly staff their projects
- Business Improvements
  - Helped internal group be more confident about the data
  - Super users now able to use in ad-hoc manner
  - End users noticing improvement vs OBIEE – speed and usability
  - Have more confidence that IT can deliver results

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LESSONS LEARNED

- Not 100% autonomous – needs some looking after
  - Dedicated resource that knows ADW is still helpful
- Find good reasonable ODI resources
- Average user has trouble creating ad-hoc reports
  - Rosendin has complicated data model that's grown over the years
  - Users have preference to other analytic tools
- Meet early and often with key users
- Hire employees and contractors that fit with your culture
- Validate skill sets claimed

Take advantage of the resources available to you

- Global Leaders
- Customer Advisory Board
- Trusted Oracle Partners

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THE FUTURE

- Increase adoption of Oracle Analytics

- Improve current analytics built in OAC

- Execute some of findings from the assessment.

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QUESTIONS?

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