



Effectiveness of Technology

2011 Infrastructure Forum
December 1, 2011

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Dallas Area Rapid Transit

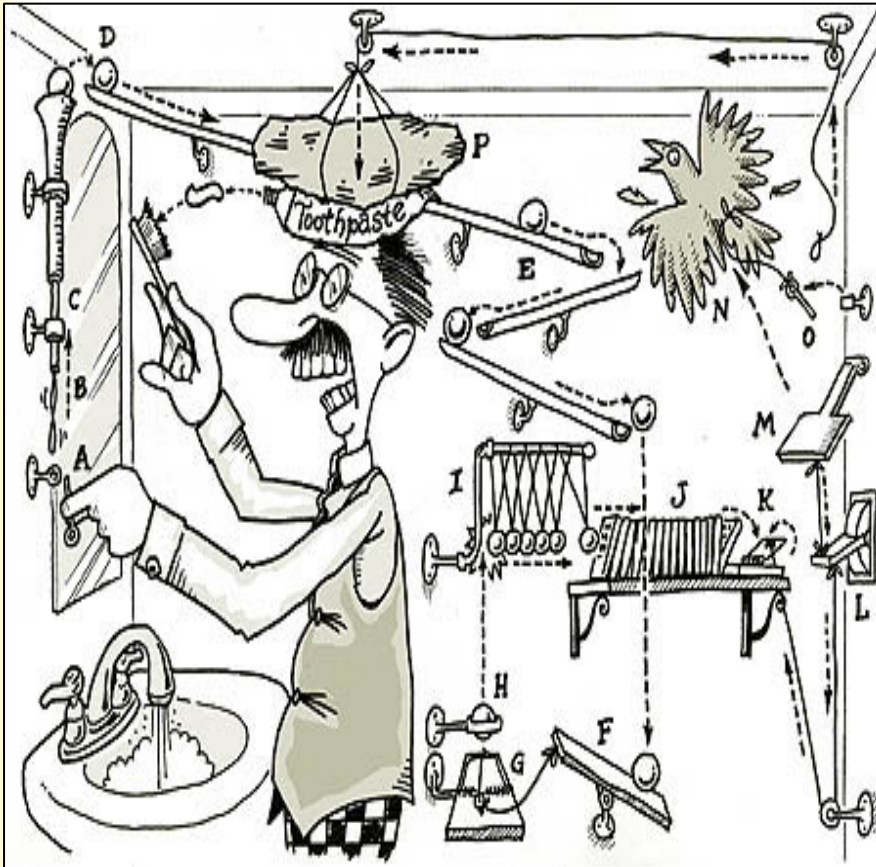


Technology

Why Introduce Change?



Drivers of Change



- Need for Improvement
- Benefit must Out-Weigh Cost
- Must be **Effective!**

Taking a Chance

- What is the need?
- Can Technology Help?
- Will it **Actually Work**?



The Good, The Bad &.....



- Attempted Several Initiatives
- Some have Worked Well, Others Need Work
- Here are a few examples...

Technology Initiative Examples

Success - Project Portal

1st Step Taken - Central Real Estate Inventory

Door Opening - Web Based Management

Just Starting - Tablet Technology

Project Portal



Situation:

Printed Monthly Budget Books
& Program Schedules



Available to Senior Managers

Need:

Access to Real-Time Data for
all Team Members

Project Portal

Dashboard Platform
for
Ease of Viewing



VERSION 1.0

Home

Documents

- Manuals & Procedures
- Engineering Document Control
- Rail Program Development File Room
- Field Records
- KPI Definitions

DASHBOARD

Project Dashboard

| | BUD | SCH | CHG | RFI | SUB | MSG |
|--|-----|-----|-----|-----|-----|-----|
| AGENCYWIDE PROJECTS | | | | | | |
| COMMUTER RAIL | | | | | | |
| LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 2 RELATED | | | | | | |
| LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 2A | | | | | | |
| LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 2B | | | | | | |
| LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 3 | | | | | | |
| LIGHT RAIL TRANSIT (LRT) OTHER PROJECTS | | | | | | |
| PHASE 2030 - 2030 SYSTEM PLAN PROJECTS | | | | | | |
| RELATED BUILD-OUT PHASE 1 - "AMENDMENT 10" | | | | | | |
| RELATED BUILD-OUT PHASE 1 - "AMENDMENT 13" | | | | | | |
| STREETCAR PROGRAM | | | | | | |

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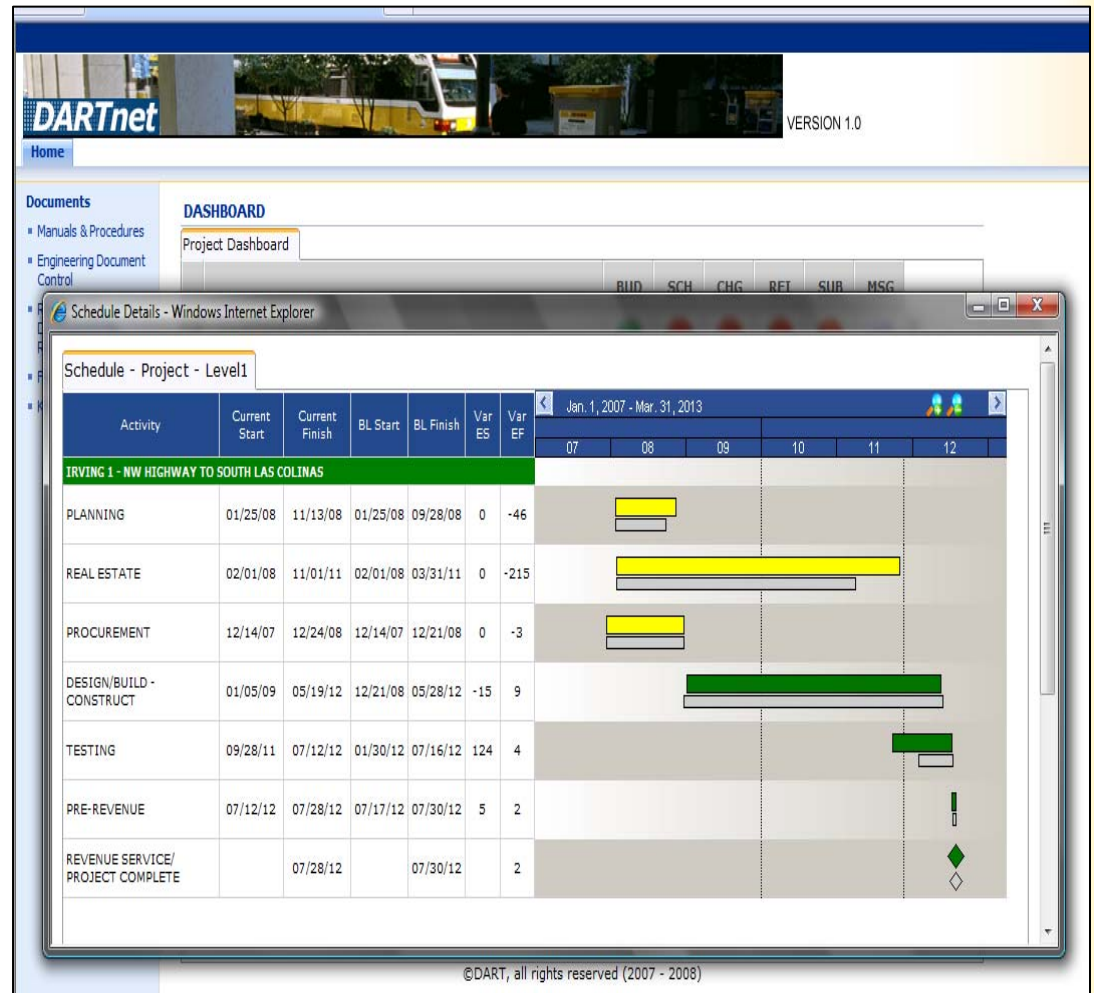
Project Portal

The screenshot displays the DARTnet Project Portal interface. On the left, a sidebar contains a 'DASHBOARD' section with a 'Project Dashboard' list and a 'Documents' section with links to 'Manuals & Procedures', 'Engineering Document Control', 'Rail Program Development File Room', 'Field Records', and 'KPI Definitions'. The main content area is titled 'Program Details - Windows Internet Explorer' and features a 'Program Details' tab. The details include: Program Id: 29, Program #: PH2B, Program Name: LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 2B, and Program Description: Phase 2B consists of approximately 18.0 miles of light rail transit lines extending from Northwest Highway out to DFW Airport (Irving/DFW Corridor) and extending eastward from the Downtown Garland Station to the Rowlett Park and Ride (Rowlett Corridor). Below the text are two maps: the top map shows the Rowlett area with a blue line indicating the proposed rail route; the bottom map shows the Irving/DFW Corridor with an orange line indicating the proposed rail route. The bottom map also labels the 'TRE Line' and 'Farmers Branch'.

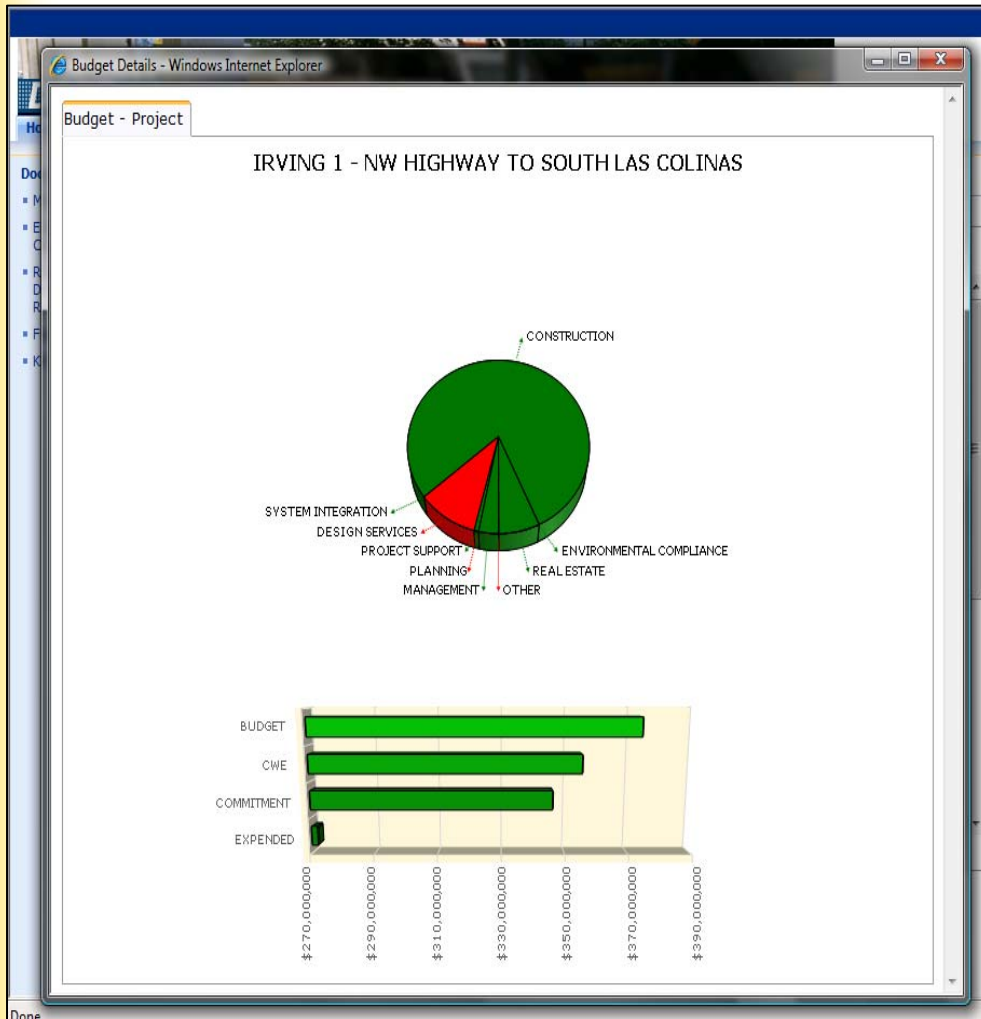
Summary Description of Project Scope

Project Portal

Program Schedules
Updates Monthly



Project Portal



- Budget Data From Cost Management System (CMS)
- Integrated with DART Finance

Project Portal

- Updated Monthly
- Drill down into budget line items
- Export to Excel

Budget Details - Windows Internet Explorer

Budget - Project Budget - Program - Project - BUDGET

1 of 1 Whole Page Find | Next Select a format Export

DALLAS AREA RAPID TRANSIT PROJECT SUMMARY

| | DESCRIPTION | ORIGINAL BUDGET [A] | CURRENT BUDGET [B] | CURRENT COMMITMENT [C] | FUTURE COMMITMENT [D] | CURRENT VARIOING EST. [E=C+D] | BUDGET VARIANCE [F=B-E] | EXPENDED TO DATE [G] |
|---|--------------------------|---------------------|--------------------|------------------------|-----------------------|-------------------------------|-------------------------|----------------------|
| LIGHT RAIL TRANSIT (LRT) BUILD-OUT PHASE 2B [PH2B] | | | | | | | | |
| IRVING 1 - NW/HIGHWAY TO SOUTH LA S COLINA S [LCBR01006] | | | | | | | | |
| 1 | MANAGEMENT | 19,215,361 | 11,604,765 | 2,762,320 | 890,842 | 3,653,161 | 7,951,604 | 2,402,856 |
| 2 | PLANNING | 0 | 562 | 29,370 | 0 | 29,370 | (28,807) | 562 |
| 3 | PROJECT SUPPORT | 2,670,297 | 2,794,570 | 399,413 | 567,490 | 966,903 | 1,827,666 | 426,861 |
| 4 | DESIGN SERVICES | 33,895,886 | 36,875,808 | 38,528,127 | 688,228 | 39,216,356 | (2,340,548) | 53,113,822 |
| 5 | SYSTEM INTEGRATION | 0 | 72,888 | 72,888 | (514) | 72,373 | 514 | 39,265 |
| 6 | CONSTRUCTION | 288,392,090 | 297,557,716 | 297,552,049 | 0 | 297,552,049 | 35,666 | 209,488,720 |
| 7 | ENVIRONMENTAL COMPLIANCE | 2,670,297 | 171,522 | 108,500 | 59,940 | 168,440 | 3,082 | 108,440 |
| 8 | REAL ESTATE | 24,033,306 | 24,225,253 | 6,554,077 | 17,479,213 | 24,033,290 | 191,964 | 6,552,406 |
| 9 | OTHER | 0 | 283,759 | 338,147 | 0 | 338,147 | (64,388) | 289,894 |
| R | RESERVE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total: IRVING 1 - NW/HIGHWAY TO SOUTH LA S COLINA S [LCBR01006] | | 378,877,237 | 373,616,843 | 346,344,899 | 19,685,159 | 366,030,058 | 7,586,784 | 272,422,907 |
| Monday, November 21, 2011 | | PBR3 | | | | | Page 1 of 1 | |

Done

Project Portal

Effectiveness

Increased Ability to Manage
The “Health” of a Project

Central Real Estate Inventory



Situation:

Decades of Paper File

Available to Real Estate

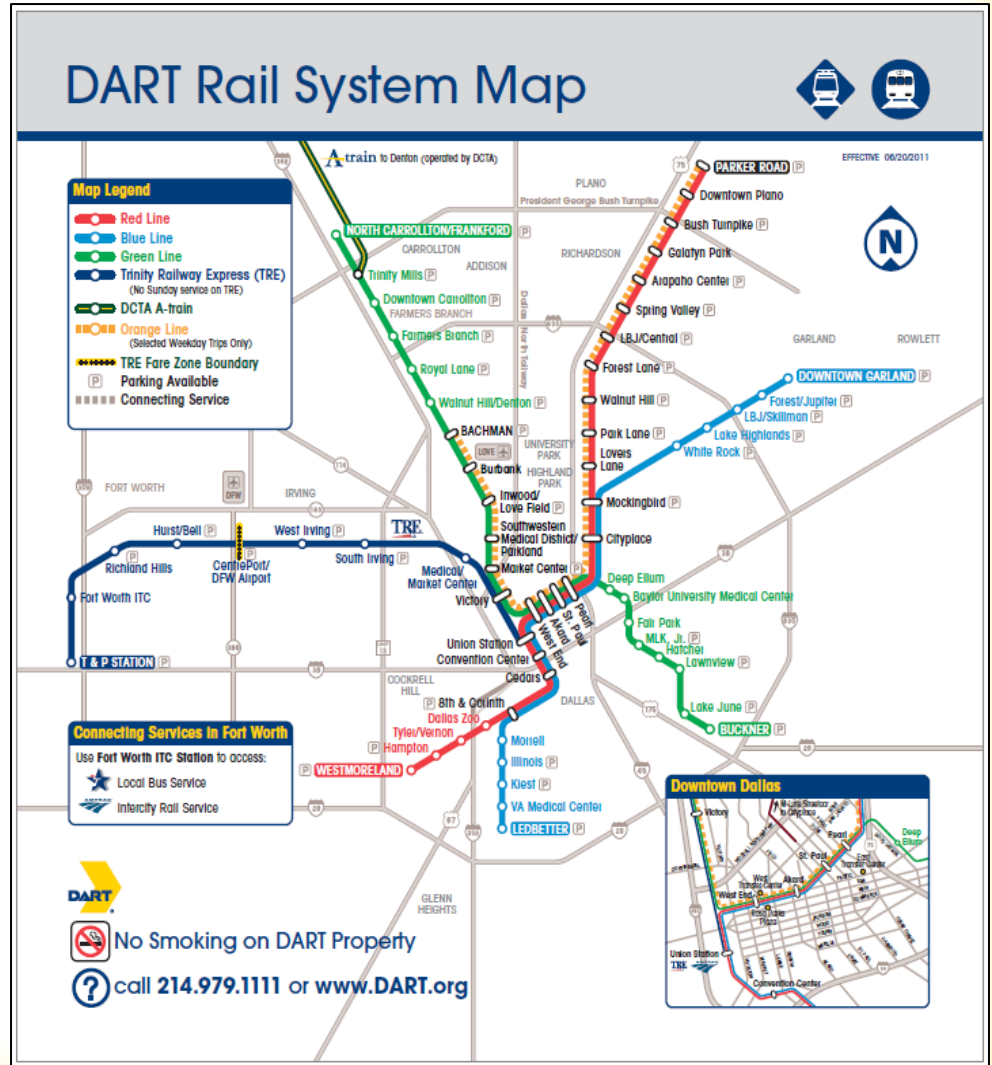
Need:

Ability to Access, Sort, Search
and Analyze Documents

Available to Project Team

Central Real Estate Inventory

We cover a lot of Area
&
Manage a lot of
Properties!



Central Real Estate Inventory

The screenshot shows a web application titled "Central Real Estate Inventory". At the top, there is a search bar labeled "Search Real Estate:" with a "Search" button. Below the search bar, a line of text lists searchable fields: "Searches: Agreement number, address, city, zip, title, description, intersection, customer name, previous owner (Advanced)". A navigation menu is located below the search bar, with tabs for "MENU", "All", "Uses", "Assets", "Recent", and "Notes". The "All" tab is currently selected. The main content area is titled "Menu" and contains the following information:

Count: 2 ID number: 200048

This application displays and searches DART real estate and leases. It will search the information stored by DART Real Estate in DARTnet tables, and Lawson Lease and License module.

NOTE: If you delete a record in Lawson (usually to change the customer number), you must re-enter the record with the same agreement number. Do not permanently remove a record from Lawson.

All
Displays lists of different groupings for the information. Users can group all records by: [city](#), [agreement type](#), [status](#), [zip code](#), [mapsco guide and page](#), [source](#), [previous owner](#), [federal funding](#), [title company](#)

Uses
Displays the uses that have been associated with DART property. Each parcel may have more than one use, and each use may have more than one parcel.

Assets
Displays all Lawson fixed assets (type LAND), and their associations with DART property. Each parcel may have more than one asset, and each asset may have more than one parcel. [Click here for the Lawson Asset Manager.](#)

New Record
Displays the form to create new real estate records in this application. Use this form for all records, except those of type 'Lease' and with a status of 'Active Revenue'. Those are entered using the Lawson Lease and License module.

Recent
Displays all records modified in the last 5 days.

Notes
Displays scope document, design team, and other correspondence related to this project.

Synch Lawson
Interface that is required after new agreements are entered in the Lawson Lease and License module. This will create matching records on DARTnet for each of the Lawson agreements. This interface must be called before any attachments can be made.

Searchable by...

- Agreement number
- Address
- Title
- Description
- Intersection
- Customer Name
- Previous Owner

Central Real Estate Inventory

- Linking to Map System for Parcel Location
- Linked to Agreements for Property Acquisition / Use

Central Real Estate Inventory

Search Real Estate: DALLAS

Searches: Agreement number, address, city, zip, title, description, intersection, customer

MENU All Uses Assets Recent Notes

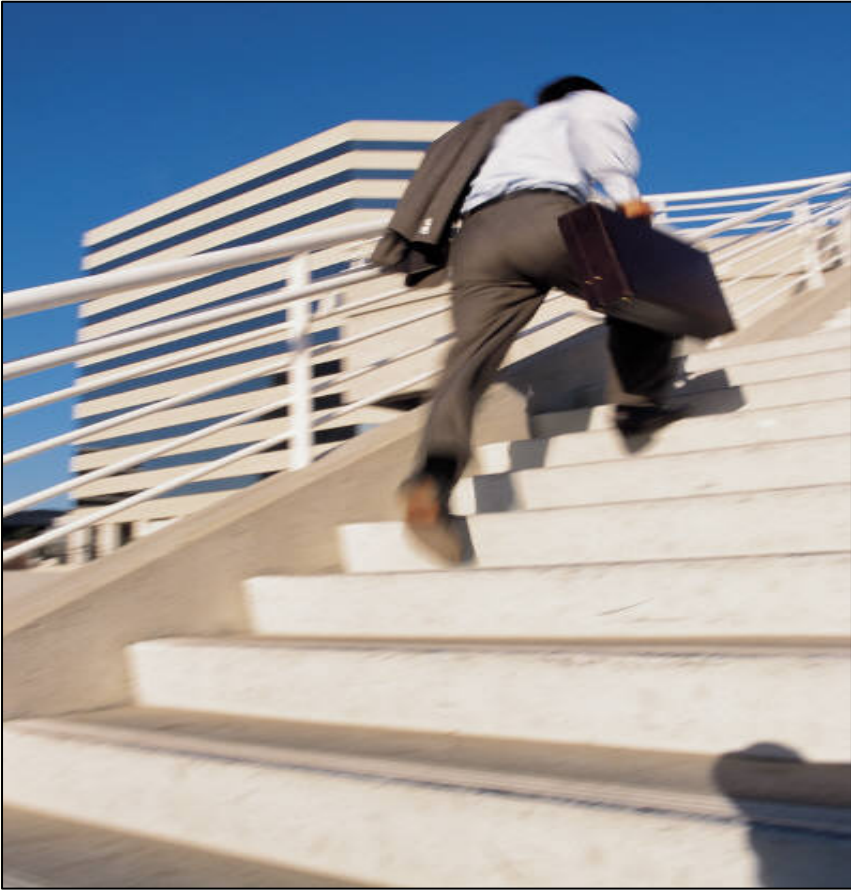
Search Real Estate

Searching for records in mapsco guide and page DALLAS

(click for [Advanced search](#))

| Agreement | Terrain Feature | Mapsco | Status/Type | Comment, Address |
|-----------|-----------------|---------------------|---|---|
| 000399 | Subsurface | DALLAS 31B sector T | Active Non-Revenue License | CABLE XING TO SRV DEPOT @ OCONNOR RD at OCONNOR RD missing street, IRVING, TX missing SOUTHWESTERN BELL |
| 18309A | At grade | DALLAS 31B sector Q | Active Non-Revenue Public Road Crossing | BRITAIN RD IMPROVMTS FROM 183/BURLINGTON missing street, IRVING, TX missing CITY OF IRVING CITY OF IRVING |
| 200312 | Subsurface | DALLAS 31B sector H | Active Non-Revenue License | 2 FO CABLES ENCASED IN 14" missing street, DALLAS, TX missing VERIZON SOUTHWEST NOTE PER 43220 |

Central Real Estate Inventory



Next Steps...

- Complete data upload
- Complete linking to maps
- Final Validation
- Fully Operation

Real Estate Data Base

Effectiveness

Increases Ability to Manage
Agency's Property Assets

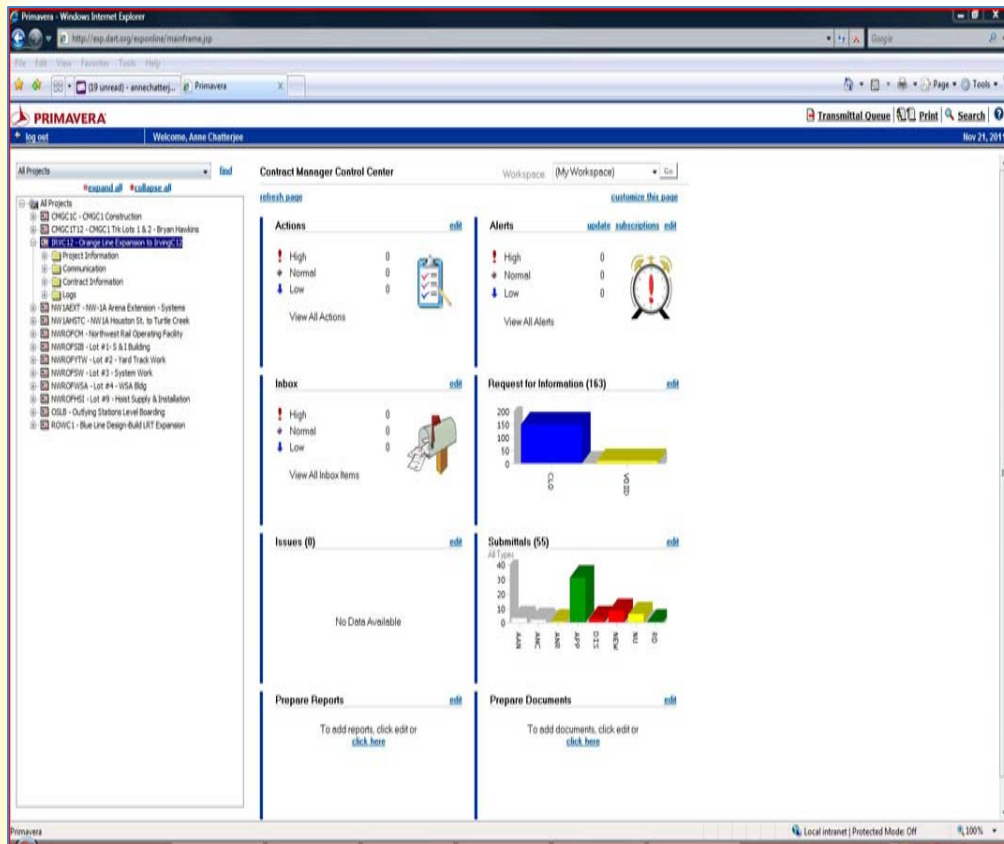
Web Based Management

Situation: Existing Program,
Specifically Tailored for
DART, Significant
Investment, **Out Of Date**

Need: More Robust
Management Program
covering more Aspects of
Program Management &
Delivery



Web Based Management

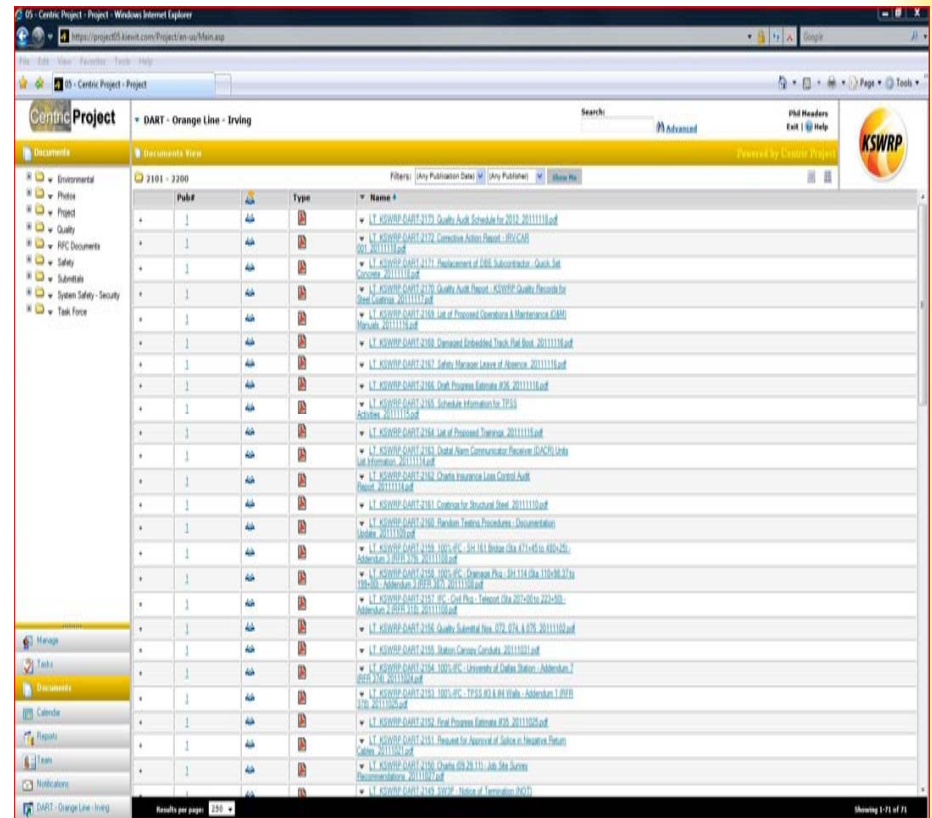


Current program...

- Provides access to Management Documents
- Generates reports on Document Statistics
- Limited and Cumbersome

Web Based Management

- Exposed to New Programs through Design-Build Contracts
- Ability to Generate, Manage & Access more Features



Web Base Management

Effectiveness

Would Increase Productivity
and Project Transparency

Tablet Technology



Situation: We need a lot of info & Carry **a lot of Paper!**

Need: Reduce dependence on Paper & Increase access to **most current** Documents

Tablet Technology

- Began to Look into Tablets
- Security Firewalls limit Network File access
- Software Compatibility limits file size for attachments



Tablet Technology



- Microsoft Tablet has “Laptop” characteristics
- Possible solution to some Restrictions from other Tablets
- Undergoing field testing

Tablet Technology

Effectiveness

To Be Determined

Moving Forward



- Stay in Tune with available Technologies
- Don't be Attracted to "Shiny Things"
- Make sure Choices are **Effective**



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