

TIER 3 BOARD GUIDANCE

Using Visual Management Systems that Help Deliver
Results and Improve

WHY IS KING COUNTY DOING VISUAL MANAGEMENT?

King County government has made major strides towards managing our performance over the last several years but we still have work to do. One technique we can improve on is increasing the use and visibility of data through visual management that will help to manage performance successfully for all lines of business. This means:

- We know what we're trying to achieve by defining **Outcomes**
- We know what we are doing to achieve outcomes by delivering **Products**
- We know how well we're performing by measuring **Quality, Cost, Delivery, Safety and Morale (QCDSM)**
- We manage how we do our work with **Visual Management and Performance Discussions**
- We learn and continuously improve with **Plan, Do Check, Act (PDCA)**

With this guidance document, we hope to create some consistency throughout the County's visual management system while also promoting departmental creativity and innovation. This guidance comes from capturing good practices and examples throughout the county.

What is Visual Management?

Visual Management is about communication and enabling teams to deliver performance improvement over time. It presents a way to standardize and manage work. We use visual management systems in order to:

- **Make problems visible** so teams can identify and solve them
- Provide a forum to **gather and discuss** organizational performance and counter-measures
- **Align communication** of key information and priorities to staff, management, and partners
- Align work to goals and outcomes
- Foster **collaboration and teamwork**
- **Measure** progress, identify trends and analyze performance
- **Show vertical alignment** of priorities and strategy, both up and down the organization, by tiering or cascading (Strategy cascades down and performance rolls up)

Is This New?

The idea of measuring, discussing and improving performance is not new. We have used KingStat, performance forums in the past to identify trends and problems. Visual management is different in that it is designed to have data presented in real time (or close to it) for everyone to see, talk about what needs to be done, and be able to track change over time.

Where can I find more?

For more on performance management, click [here](#).

For more on King County's executive priority of being the Best Run Government, click [here](#).

HOW IS KING COUNTY IMPLEMENTING VISUAL MANAGEMENT?

At King County, we use the term **tier board** to reflect the County's set of visual management tools to provide alignment across King County, both vertically and horizontally.

*A **tier board** is a large central communication point focused around up-to-date, team-specific information that provides managers and their teams a way to identify, monitor and manage their progress and performance in order to support organizational alignment and enable rapid problem-solving.*

The general framework for Tier Boards works like this:



WHAT GOES ON A TIER 3 BOARD?

For this guidance document, we will be focusing on the Line of business level (tier 3). Tier 3 boards should generally be used to illustrate the measurement of the progress and performance of three key components:

1. ***Standard Operational Work (recurring)***: The work we do every day to deliver products to customers. This work includes:
 - *Inputs*: The resources used in activities to produce products and outcomes.
 - *Processes*: The processes we implement to deliver products and achieve outcomes (usually illustrated through value stream maps).to create:
 - *Products*: Something you produce that is given to an internal or external customer to achieve a desired outcome.
2. ***Outcomes***: The change in a person, conditions, or the environment that results from the delivery of products to customers. Outcomes are the intended result or change from delivering our products. The figure below is an example of tracking outcomes.
3. ***Non-Standard Project Work (nonrecurring)***: Key projects with an end date, designed as part of a larger strategy to establish a new standard for operational work and achieve desired outcomes. The county currently uses Quad Charts to report to Executive leadership the status of projects (see figure below) but some departments have created their own project tracking tools that more closely meet their needs. Remember, the tools needs to work for you and your team! The figure below is a example of a quad Chart (more on quad charts in the next section).

What is a performance measure?

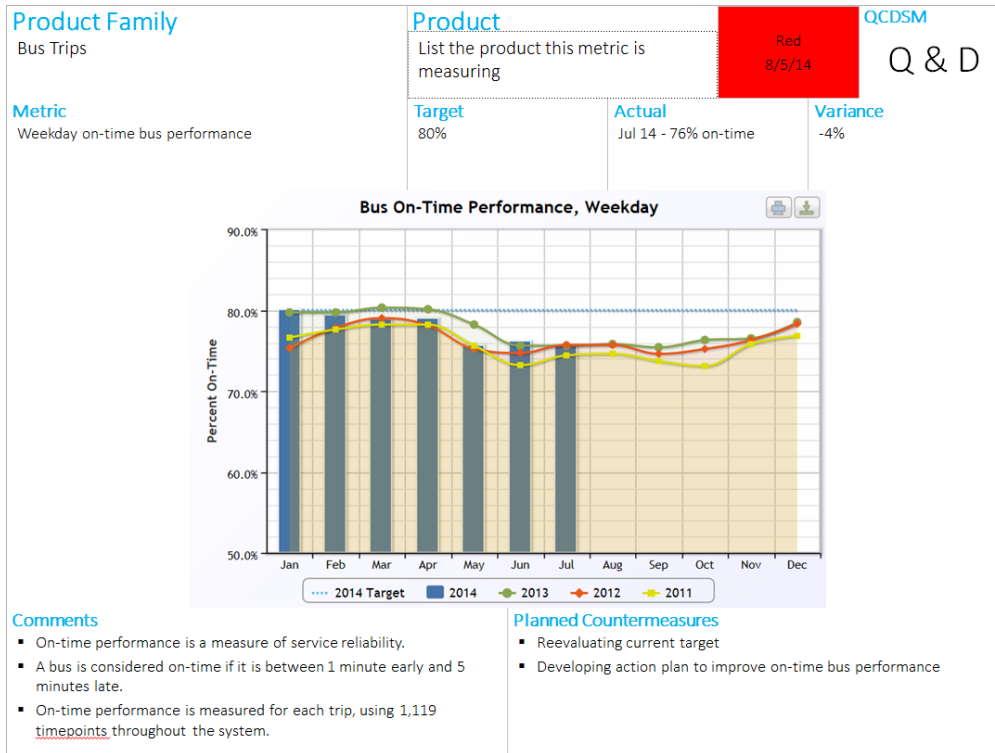
The right **performance measures** can help to measure the progress and performance of each line of business.

A **performance measure** is a numeric description of an organization's work and the results of that work. Performance measures are based on data and tell a story about how the organization is delivering its products and whether it is achieving its desired outcomes.

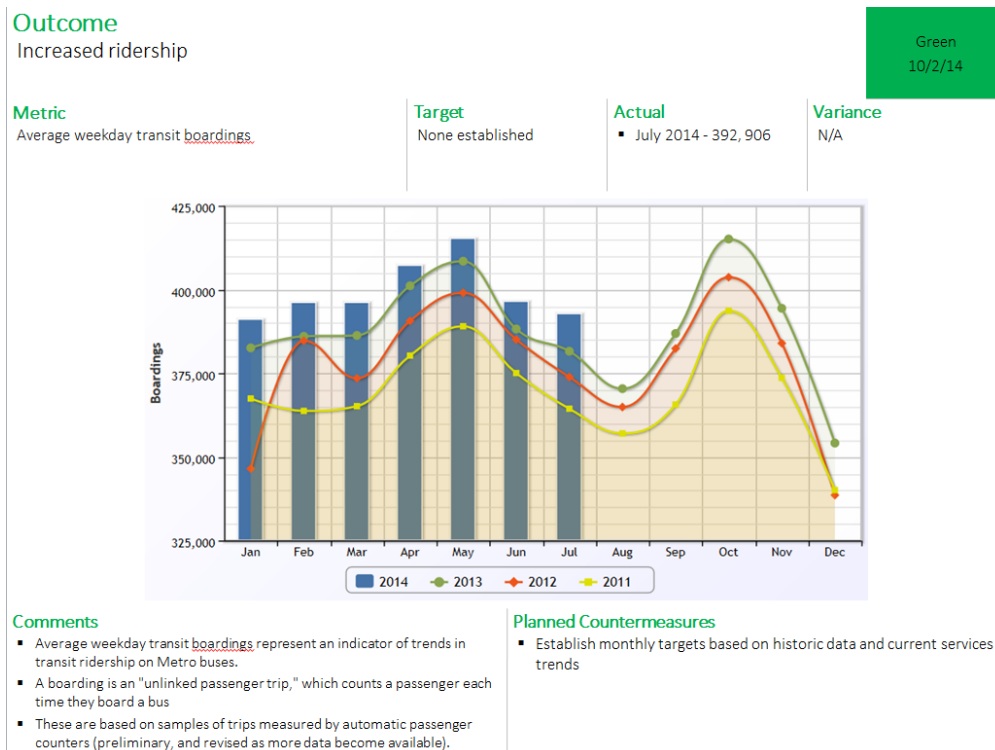
When measuring products, measures should generally include **QCDSM (Quality, Cost, Delivery [timeliness], Safety, and Morale)**.

PERFORMANCE MEASUREMENT GUIDE				
	RECURRING OPERATIONS			OUTCOMES
	Input Measures	Process Measures	Product Measures	Outcome Measures
DEFINITIONS	The resources used in activities to produce products and outcomes.	Something you produce that is given to a customer to achieve a desired outcome. Processes and Products are nouns and measured through QCDSM : <ul style="list-style-type: none"> ▪ Quality: A measurement of deviance from a standard that has been created based on customer requirement (how frequently a process successfully creates the expected output) ▪ Cost: The cost of delivering a product ▪ Delivery: A measurement of time, efficiency of service delivery ▪ Safety: Any evaluation of the health or safety of employees or customers. ▪ Morale: An evaluation of the engagement of the workforce. 		The change in a person, conditions, or the environment that results from the delivery of activities and products. Outcomes are the intended result or change from delivering our products.
EXAMPLES	Staff, vehicles, contracted services, building space, technology, suppliers, supervisor skill, employee survey, data sources	<ul style="list-style-type: none"> ▪ Delivery: Cycle time, downtime and delays ▪ Safety: % of on-the-job injuries ▪ Morale: % of employees reporting they have the tools and resources to do their job 	<ul style="list-style-type: none"> ▪ Quality: Customer service standard ▪ Cost: Cost per unit to deliver a product 	<ul style="list-style-type: none"> ▪ Improve customer satisfaction ▪ Increase public access to products ▪ Increase market share throughout King County ▪ Reduce environmental footprint ▪ Increase employee engagement (measured with engagement index)
PUBLIC TRANSPORTATION LOB EXAMPLES	Buses, drivers, mechanics, vehicle parts	Product : Bus trips Measure : Weekday on-time bus performance (Quality and Delivery metric) Target : 80% Actual : 76% for July 2014 Variance to Standard : -4%		Outcome : Increased ridership by --% of population by 2025 Measure : Transit boardings

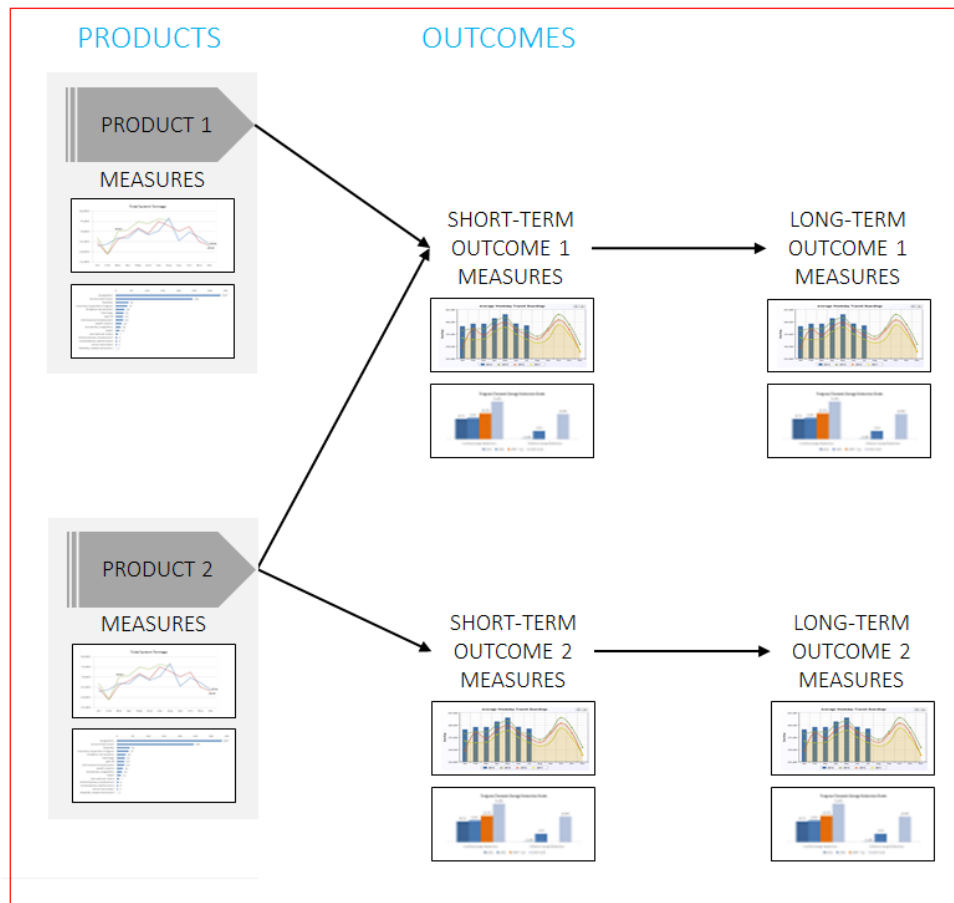
How can I visualize the three key components of a Tier 3 board?



- Measures that tell you whether or not you are achieving your desired outcomes:



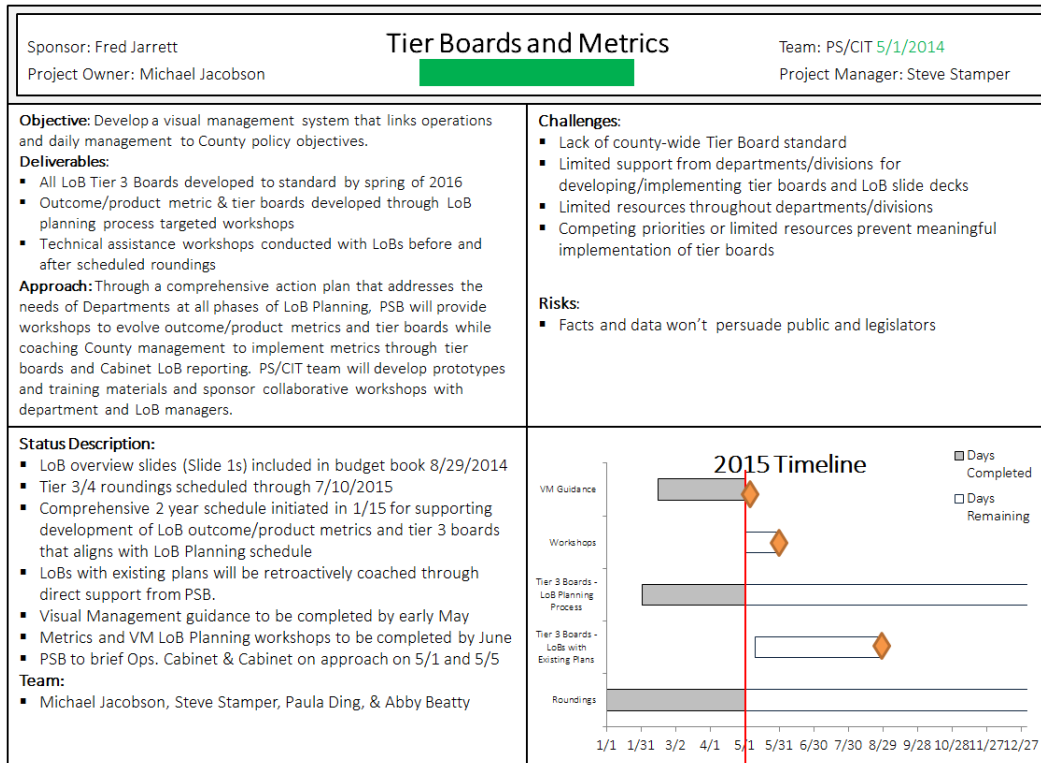
- How your products align to and contribute to achieving your outcomes (see example below):



Some lines of business have five products while others have 30. It will be up to each team to determine what is valuable for their tier 3 board and how to track and manage their products and outcomes (i.e. what should be elevated from tier 2s to the tier 3 board).

Each line of business should also designate measures for project work and visualize those measures in a way that makes sense for their team. Many lines of business are using **quad charts** to track projects (see example below).

A **quad chart** is the established County tool used to track and monitor initiatives and projects. Each quad chart includes a specific project's objective, deliverables, status, challenges and risks, and the timeline, providing clarity and helping leadership and managers monitor project status.



Keep in mind, a tier 3 board for a line of business will look very different from that of another. That's Ok. Tier 3 boards should work for a specific line of business and its leadership. See appendix B for examples of tier board components already in use at the County.

Remember, if your board is not useful as a management tool, change it. ***Tier boards only work when they are used!***

WHAT WORKS WHEN VISUALIZING DATA?

A successful visual management system requires good *visual controls*.

*A **visual control** is a tool to communicate real-time information by using visual signals instead of text or other written instructions. Visual controls allow quick recognition of information to increase efficiency and clarity.*

Visual controls must be useful for the team managing the work. Visual controls come in many different forms. (See Appendix A for examples of visual controls we've found already being used on different level tier boards by lines of business at the County.) If the visual controls on your tier board are not useful, change them. And continue changing them until they work. The best visual controls:

- Engage everyone in *what is important*
- Show *status at a glance*
- Show when the visual control/metric was *updated*
- Show *alignment* of recurring and nonrecurring work around a common purpose
- Make *problems visible in real time*
- illustrate quantifiable *targets*
- make *improvement opportunities* apparent
- show *countermeasures and enables real-time problem solving*

Visual controls include:

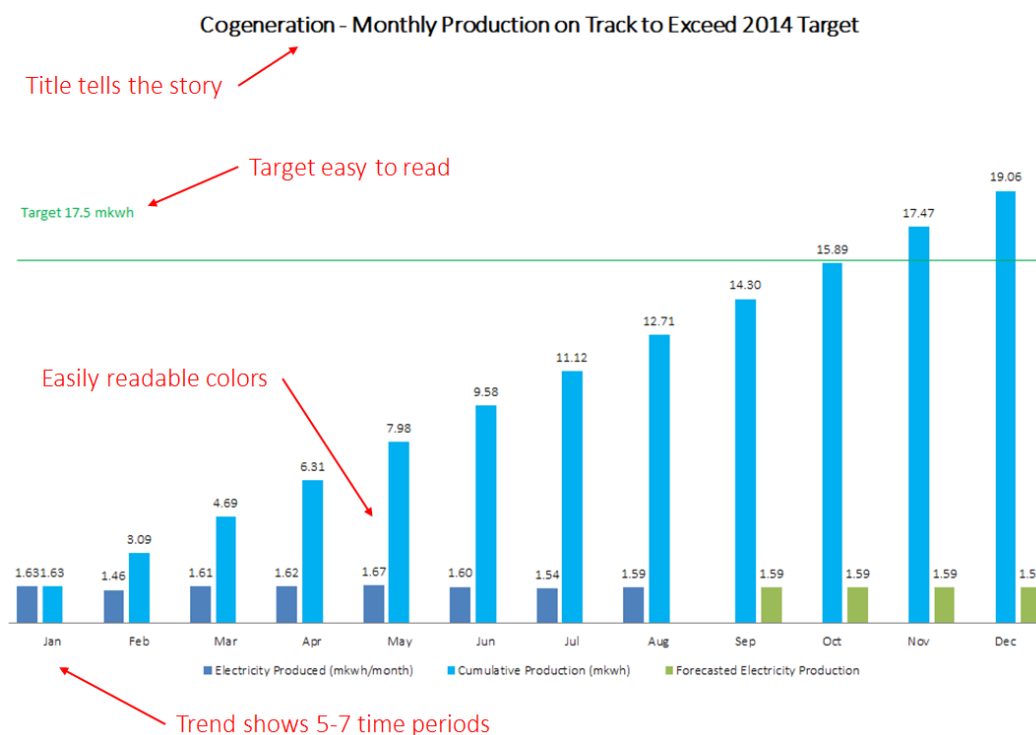
- Graphs
- Color coding data
- Traffic light performance monitoring
- Other visual cues to help manage performance

What makes a good graph?

Many lines of business are already using graphs to help manage performance. Below are some basic techniques for building good graphs:

- Use the title of the graph to tell the story of the data (not just state the type of data)
- Targets should be easy to read and compare to actuals
- Targets can be variable over time/season

- Trends should ideally be shown with 5-7 time periods
- Percentages *and* sample size (one or the other doesn't tell the whole story; "n=")
- Data should be visualized using colors that are easy to read and interpret
- Ranges in data should be visualized in acceptable ranges and control limits
- Avoid pie charts - they don't capture data over time (a stacked bar chart is a good alternative)



HOW DO I USE A TIER BOARD?

Visual management is the act of using visual controls to manage the delivery of services and products. ***It is not a one-way flow of information*** on a tier board. A tier board is the presentation of visual controls that should enable teams to review real-time performance information on a regular basis.

Management teams should regularly meet in front of their tier boards for an active discussion to learn, adjust, and improve their business. The successful implementation of a visual management system generally involves doing three things:

- Using ***Visual controls*** (See Appendix A)

- Having *Stand-up Meetings* around tier boards
- Seeking to continuously improve by *understanding what we are trying to achieve and where we are now*

Together, these three actions provide a foundation upon which teams can better manage performance.

What are Stand-up Meetings?

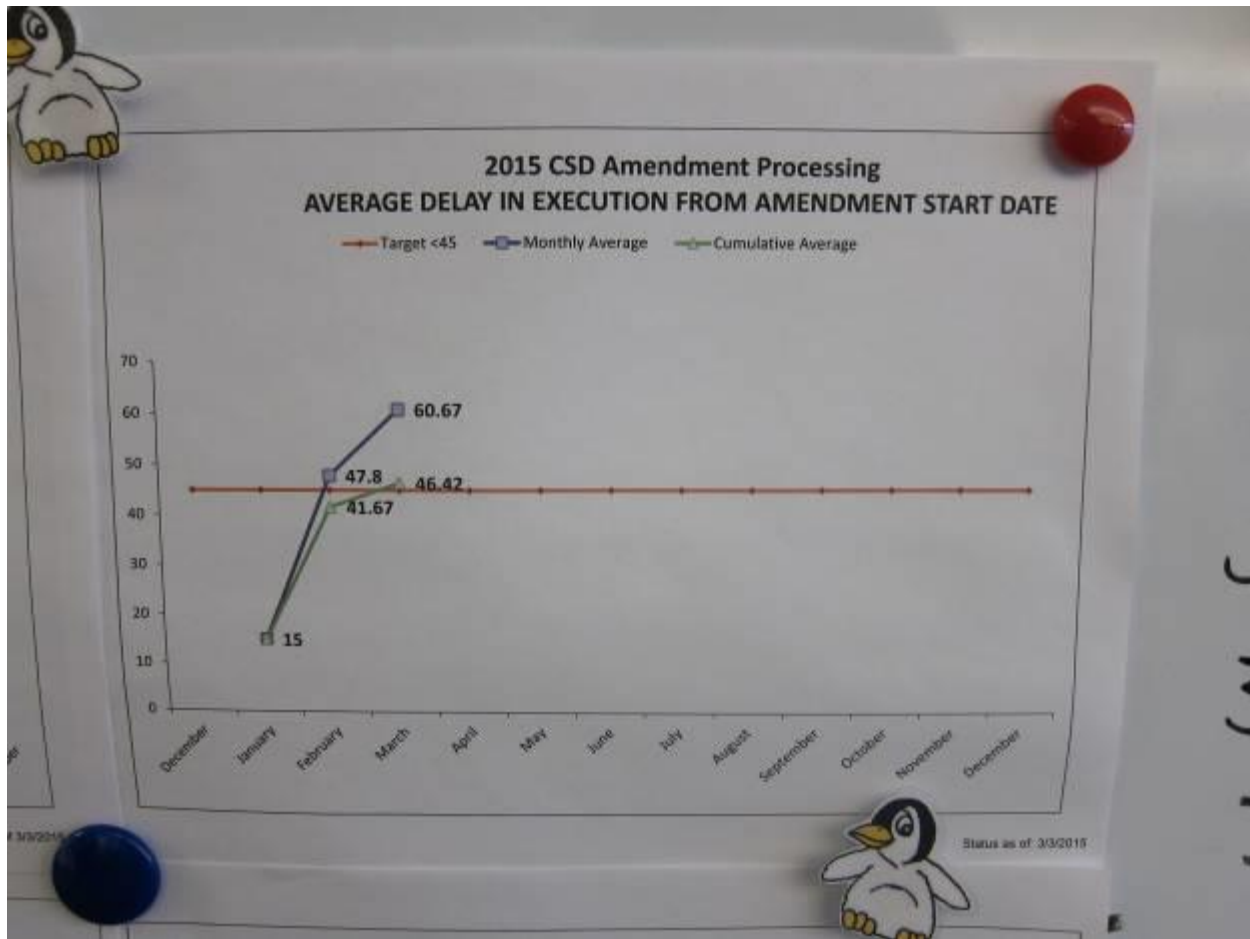
Stand-up Meetings are regular, mandatory meetings held in front of a team's tier board. The purpose of a Stand-up Meeting is two-fold:

- To provide a forum where teams discuss their progress on a regular basis and make work commitments
- To provide a forum where teams review performance measures identify problems, and discuss of improvement actions

Teams should stand to ensure that meetings are kept short. In addition stand-up meetings should be:

- Attended by all members of the team
- Kept brief (ideally between 10 and 15 minutes long)
- Held at a regular time
- Follow a set agenda (see page 21 of this guidance note)

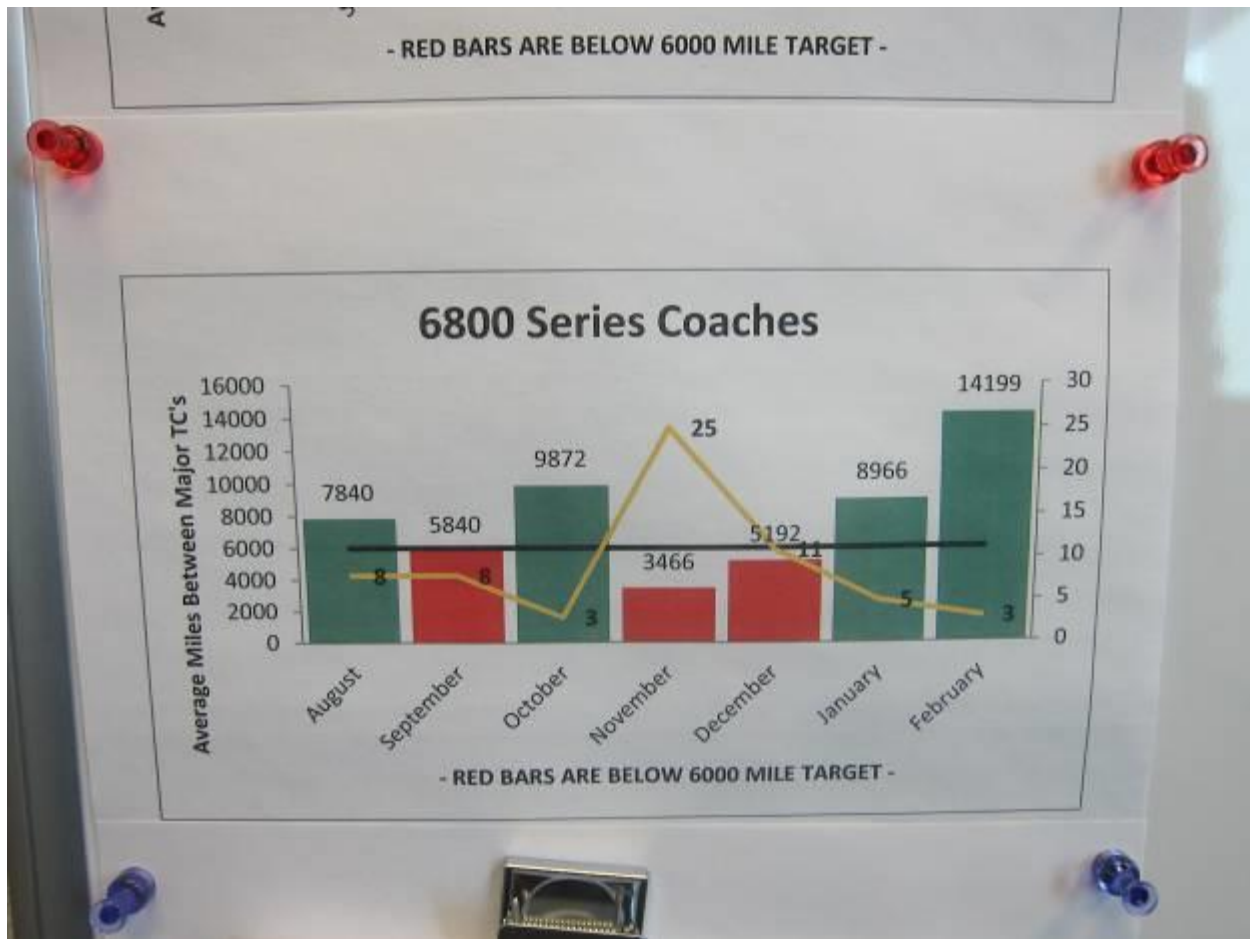
APPENDIX A: EXAMPLES OF VISUAL CONTROLS THAT WORK



What makes this useful?

- Monthly cadence is close to real-time
- Monthly average (blue line) shows short term problems or successes.
- Cumulative average shows long term problems or successes.
- It's easy to see the difference between target and actual at any point.

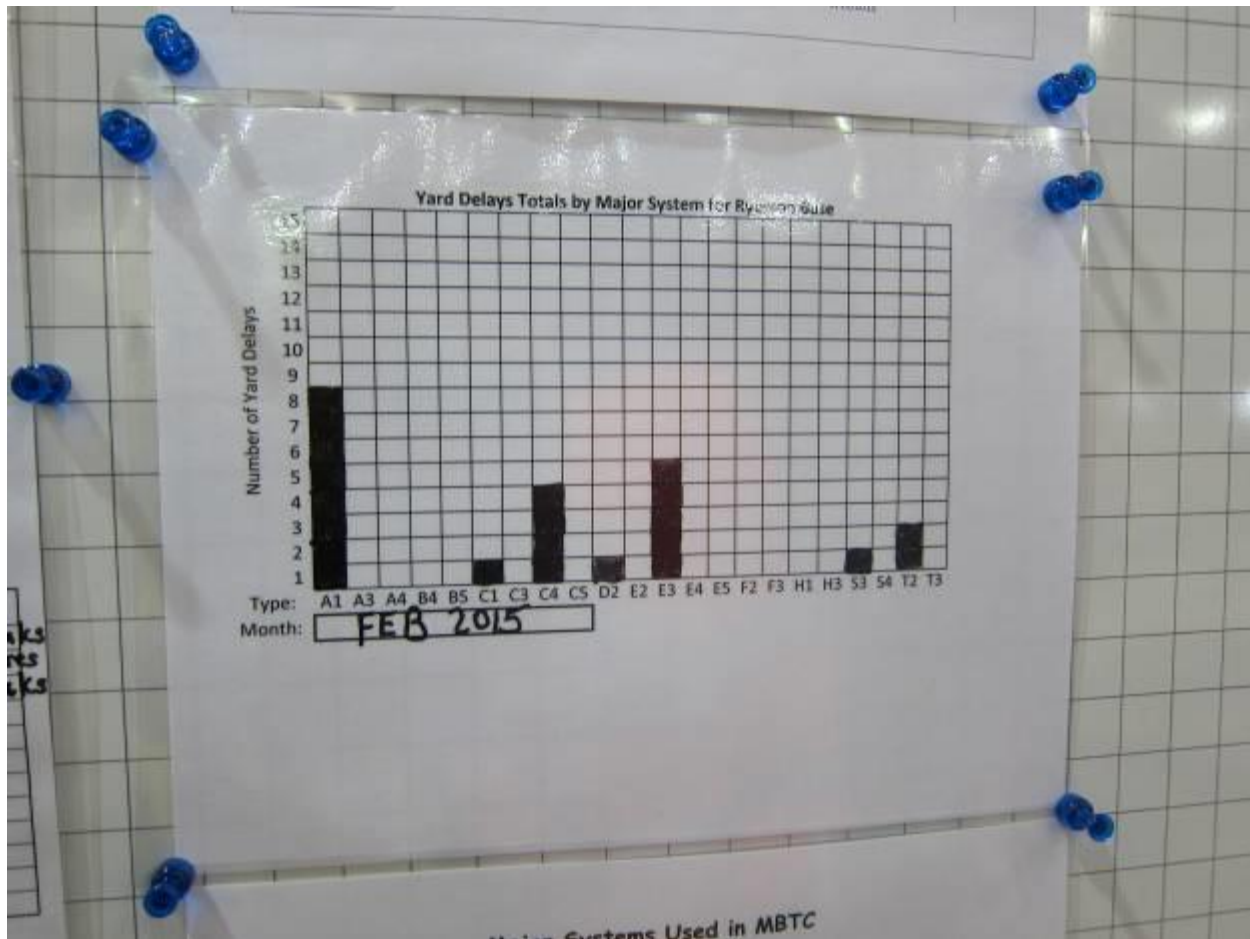
This visual control is supported by a weekly chart that shows the timeliness of all the items currently-in process, which identifies if any single item could cause problems with the monthly average.



What makes this useful?

- Monthly cadence is close to real-time
- Green/Red bars clearly show the months where targets were not met
- It's easy to see the difference between target and actual at any point.

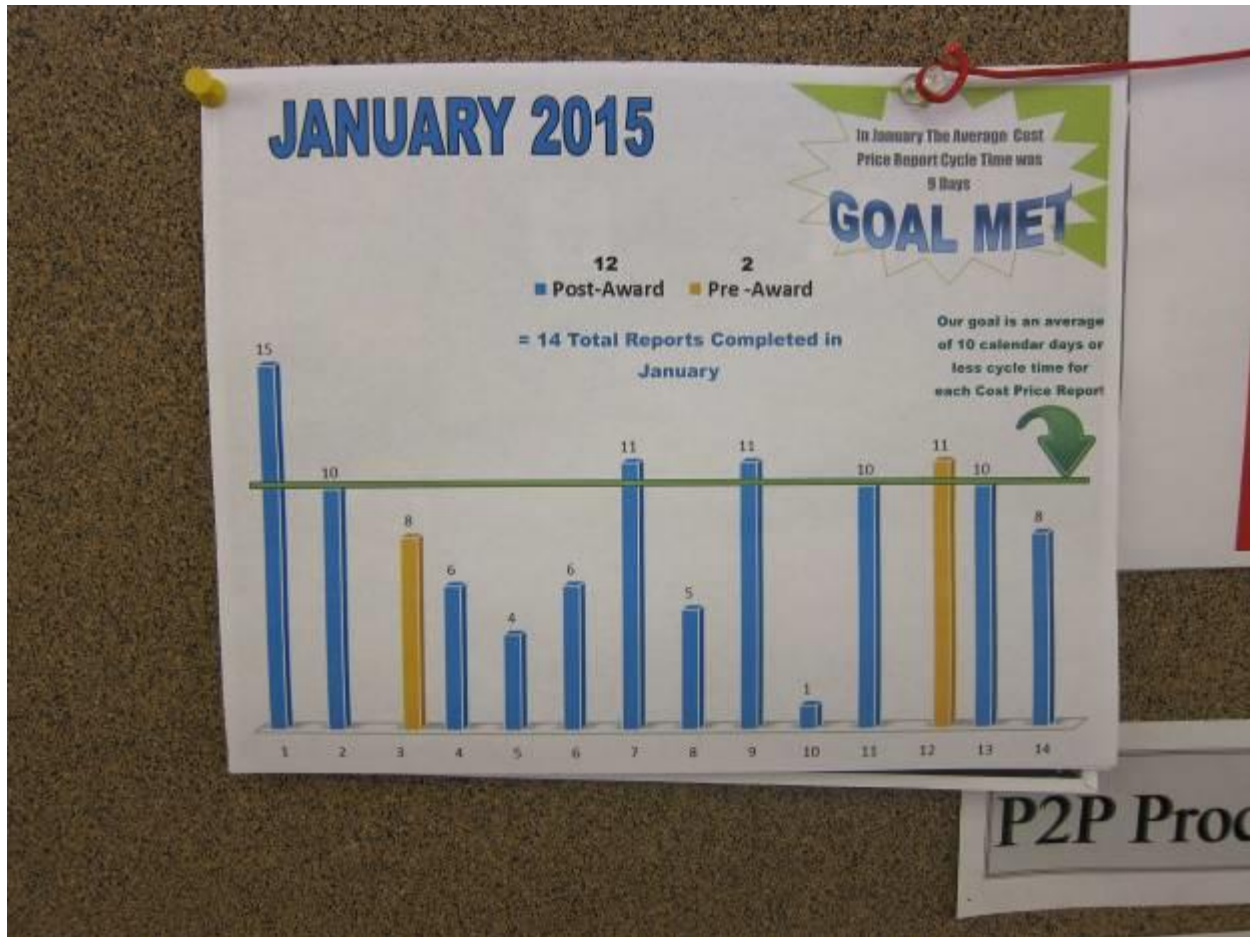
The yellow line represents the number of Major Trouble Calls per month. By adding that information, this graph provides more than the outcome metric (average miles, which is important for reporting) and starts to enable root-cause problem solving about the numbers of trouble calls which can be actionable.



What makes this useful?

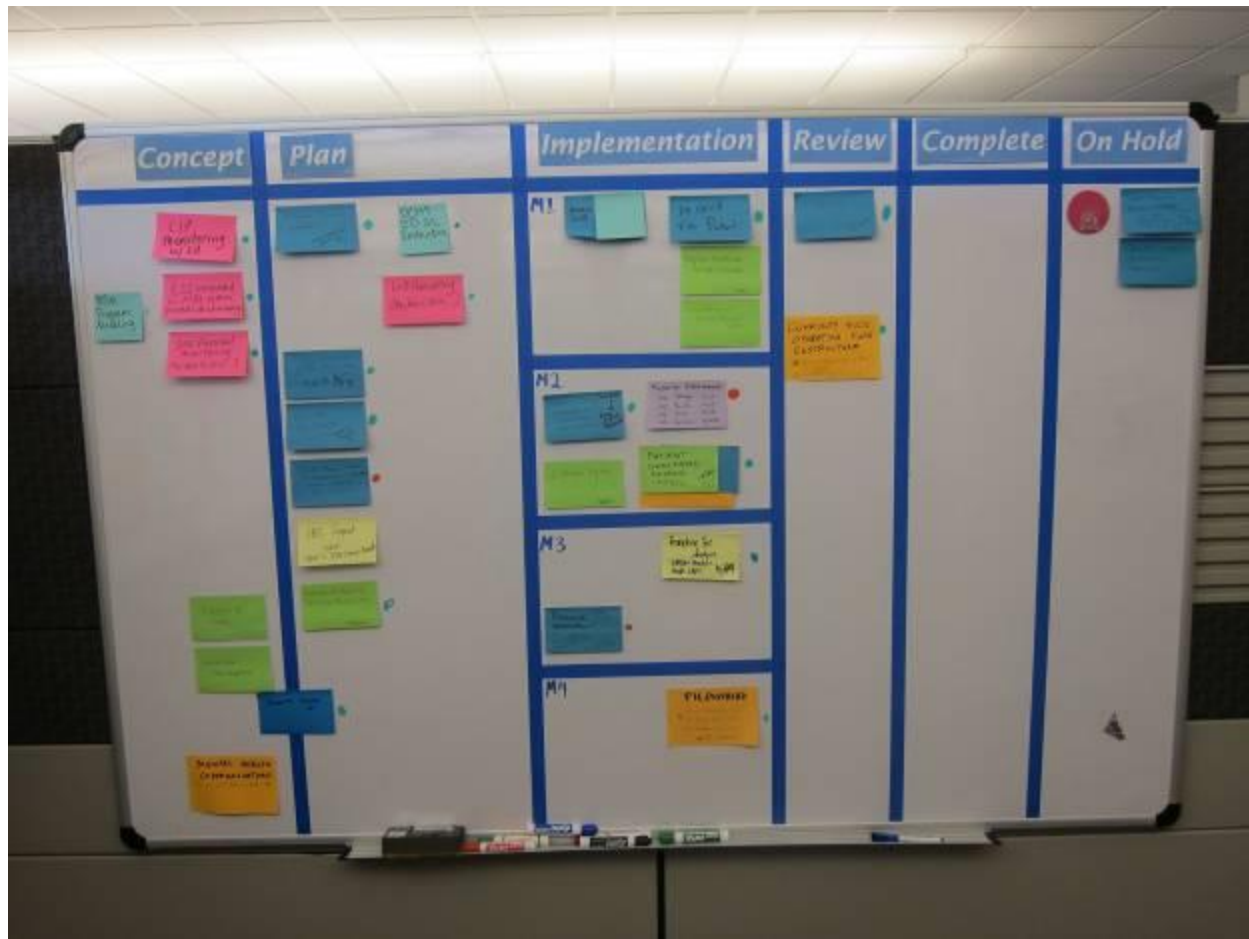
- It shows real-time data
- By showing the data graphically, anybody can immediately see what the biggest causes of problems were this month. You don't even need to count! That understanding lends itself to problem solving.

This type of visual control, sometimes called a “defect tracker,” is different from most other visual controls because it frequently doesn't show goals/targets. It is simply intended to show the quantity and nature of defects that a team is trying to reduce.



What makes this useful?

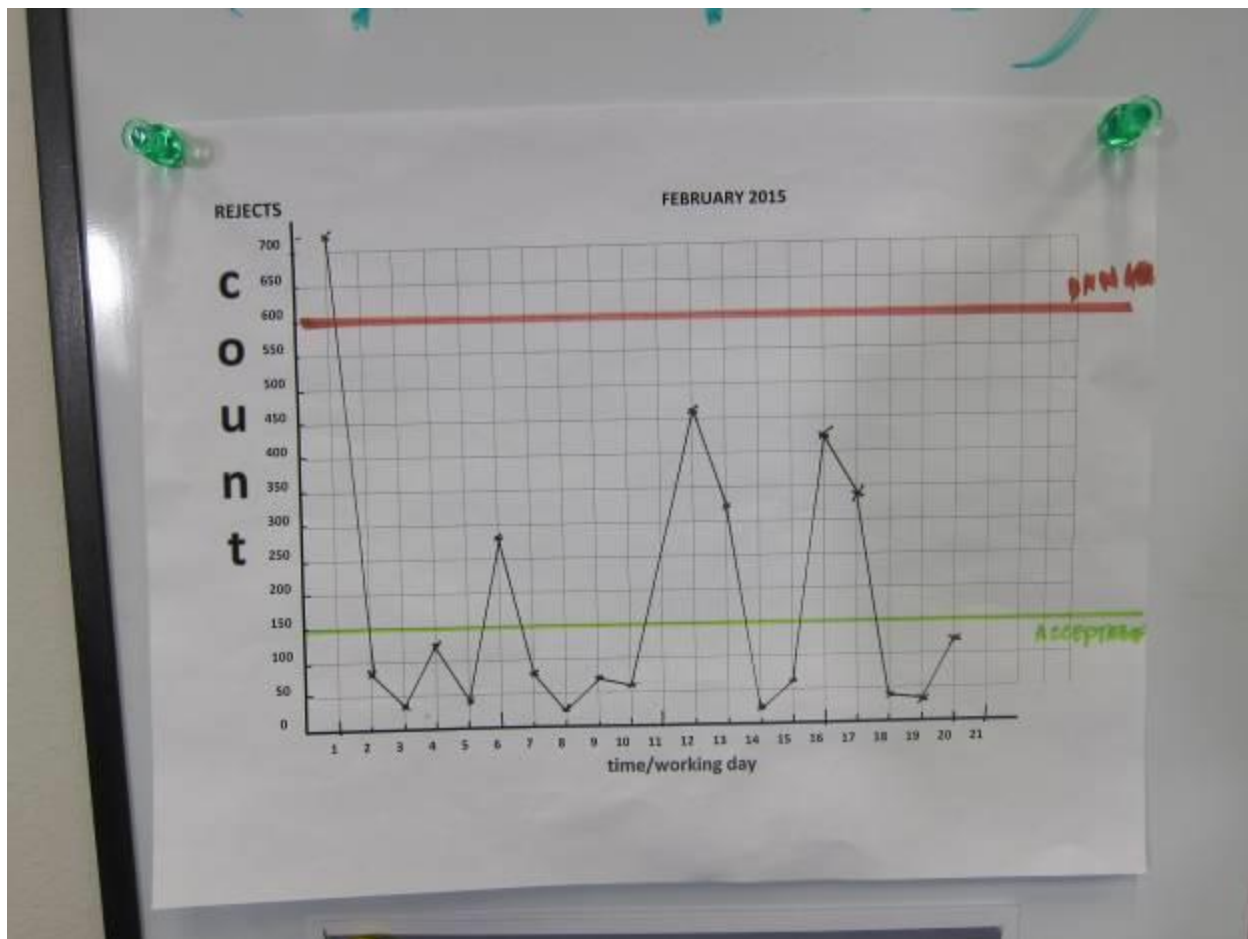
- Target metrics (10 days) and actual performance are clearly visible.
- Instead of averages, results are visible for every single item.



What makes this useful?

- It shows all the current ongoing work, ranging from conceptual ideas to complete tasks and everything in-between.
- Individual projects have green/red indicators to show whether they are on-track or not.
- Within the Implementation boxes M1-M4, you can check whether tasks are accomplishing milestones as planned (it's small text, but it's there)
- Color coded post-its, representing different team members, start to provide information regarding whether any individual is over-capacity or not.

This type of visual control is most useful when various standards have been put into place. For example, to avoid overloading the team, determine how many items can be in “implementation” at any given time. To see whether work is flowing, set standards about how long it should take for something to move from the first phase for the last phase. For example, display one month worth of work at a time, and by the end of the month you’d expect all – or most- of the work to be in the “complete” phase













What makes this useful?

- Monthly or weekly trends are readily identifiable.
- Graphs are updated every morning with actual values.
- Rather than a target, this chart utilizes two different upper limits. The green line shows higher than desired but acceptable volumes of rejects. The red line, labeled DANGER, shows where high volumes are problematic and require problem-solving activity.

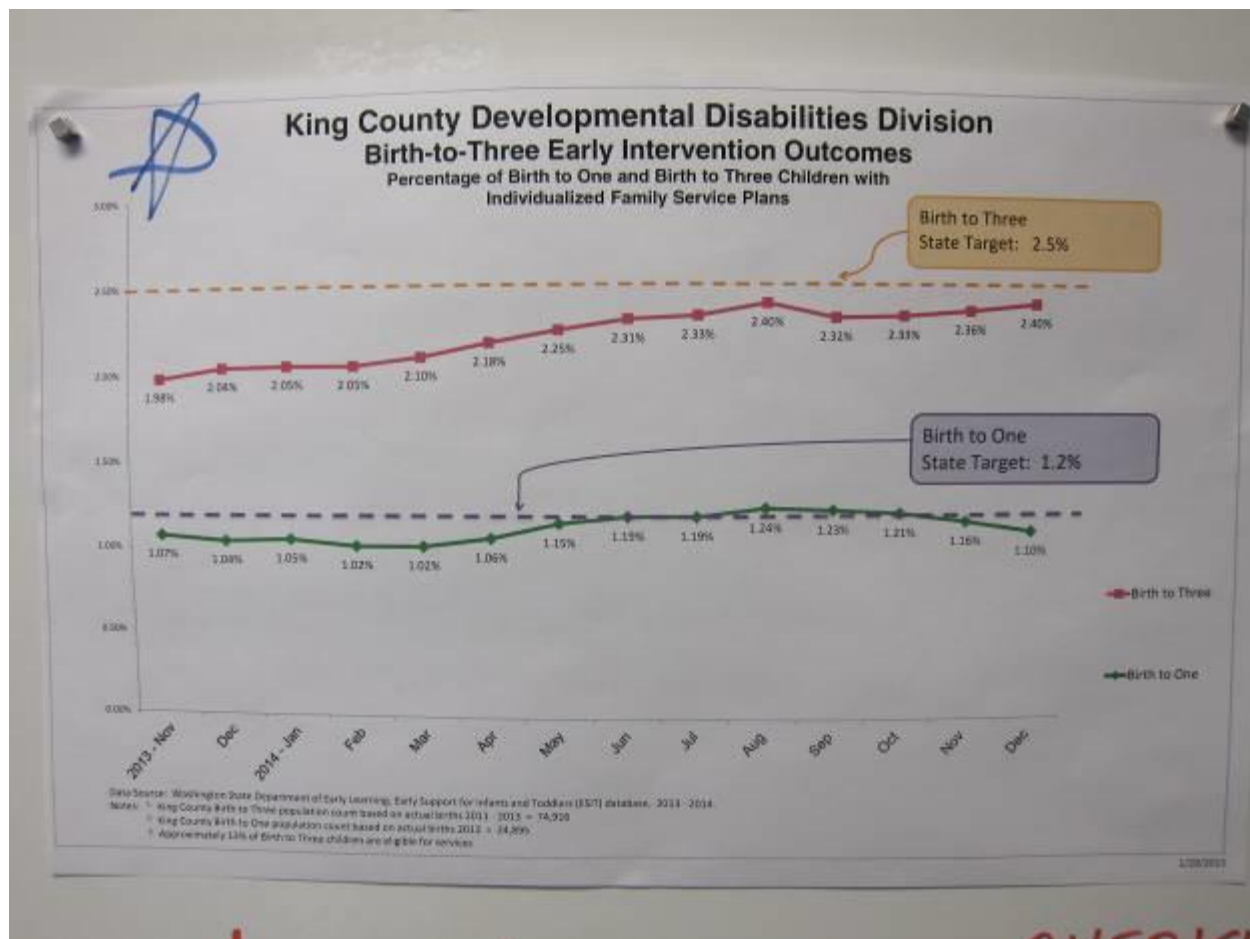
This visual control, similar to a control chart, is a good tool for monitoring processes that are relatively stable. Using different control limits allows a team to establish standard countermeasures for each level so that staff can immediately respond to problems instead of taking precious time to create a plan from scratch.

A **control chart** is a graph using historical data, plotted in time order to study how a process changes over time. A control chart always has a central line for the average, an upper line for the upper control limit and a lower line for the lower control limit.

Oracle Month End Close Schedule FEBRUARY 2015		
Module	Task / Schedule Dates	 = COMPLETED
Accounts Payable (AP)	Open module for MARCH: Thursday, February 26 (morning)	
General Ledger (GL), Projects (PA)	Open module for MARCH: Thursday, February 26 (afternoon)	
Purchasing (PO), Inventory (INV), Accounts Receivable (AR)	Open modules for MARCH: Friday, February 27 (afternoon)	
Accounts Payable (AP)	Close FEBRUARY, scheduled Monday, MAR 2	
Purchasing (PO)	Close FEBRUARY, scheduled Monday, MAR 2	
Inventory (INV)	Close FEBRUARY, scheduled Monday, MAR 2	
Fixed Assets (FA)	Run depreciation/Close FEB, scheduled MAR 5	
DEADLINE: Thursday, MAR 5, 4 p.m. 4 th Business Day Special Districts Last day to enter/post JAN transactions for Special Districts.		
DEADLINE: Friday, MAR 6, 4 p.m. Transactions for Projects Last day to enter/post Feb transactions for Projects.		
DEADLINE: Monday, MAR 9, 10 a.m. Last day to enter and post FEB GL Journals.		
Projects (PA), Accounts Receivable (AR)	Close FEBRUARY, scheduled Monday, MAR 9	
Special Districts Tuesday, MAR 10 / 7 th Business Day Reports produced and distributed.		
General Ledger (GL)	Close FEBRUARY, scheduled Tuesday, MAR 10	
 King County Financial Systems Unit		

What makes this useful?

- Green/red status shows status at a glance.
- Tasks and deadlines are clearly defined ahead of time.



What makes this useful?

- Targets and actual are clear
- Two related sets of information are combined in the same graph in a way that both are easily viewable and understandable.
- Monthly data allows the team to see trends quickly.



What makes this useful?

- This burn-down chart shows readily visible gaps between target and actual values.
- Weekly data allows Jon and Bill to know if they are on the right track

A **burn-down chart** is used when there is a known amount of work to be accomplished over a specific amount of time. The goal is that actual results will follow, more or less, the target line. If the actual results are below the line, you know that the task will be done before the deadline or if getting things done too early would be a problem, you have the option to slow down. If actual results are above the line, you know that you'll be done later than time or have the option to apply countermeasures that would speed up the work.

APPENDIX B: EXAMPLES OF TIER BOARD COMPONENTS THAT WORK



Figure 1



Figure 2



Figure 3

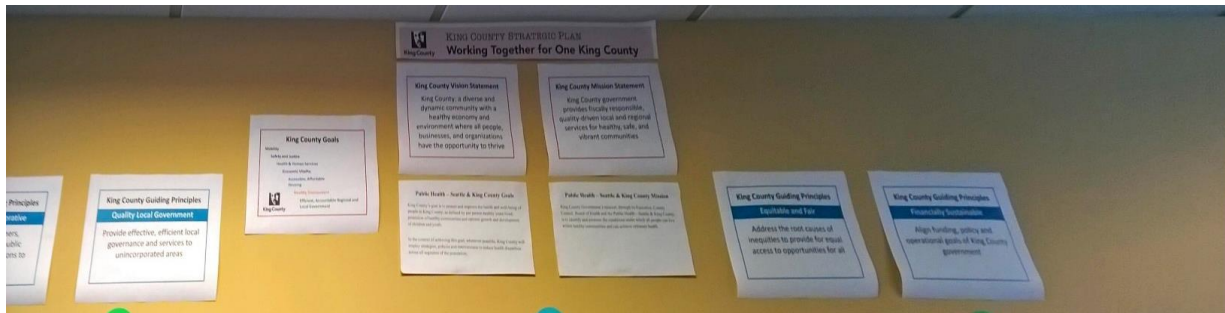


Figure 4

What works here?

- Lines of business are clearly separated (Figure 1)
- A space is reserved for data that crosses multiple lines of business (Figure 2)
- The flow from lines of business to cross-cutting categories feeds into long-term outcomes (all Figures from left to right)
- Goals and Vision are articulated at the top of the board (Figure 4)
- Project cards are put into a plastic cover so people can write on them without having to reprint a new one.

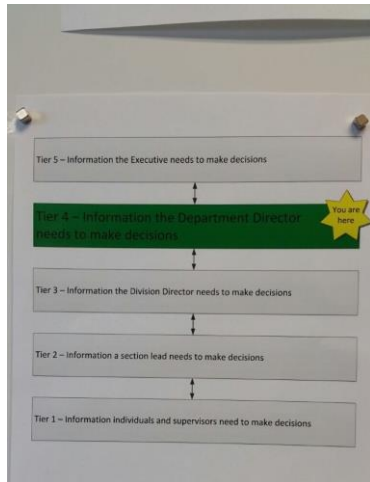


Figure 5

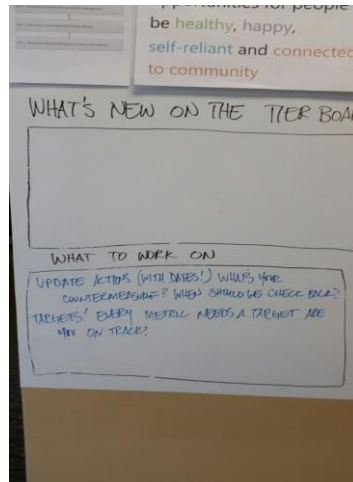


Figure 6



Figure 7

What works here?

- “You are here”: A clear legend that shows the relationship between the tier boards and identifies what board you are looking at (Figure 5)
- Calling what’s new on the board and what to work on (Figure 6)
- Conversely, identifying what projects do not have updates this week. (Figure 6)

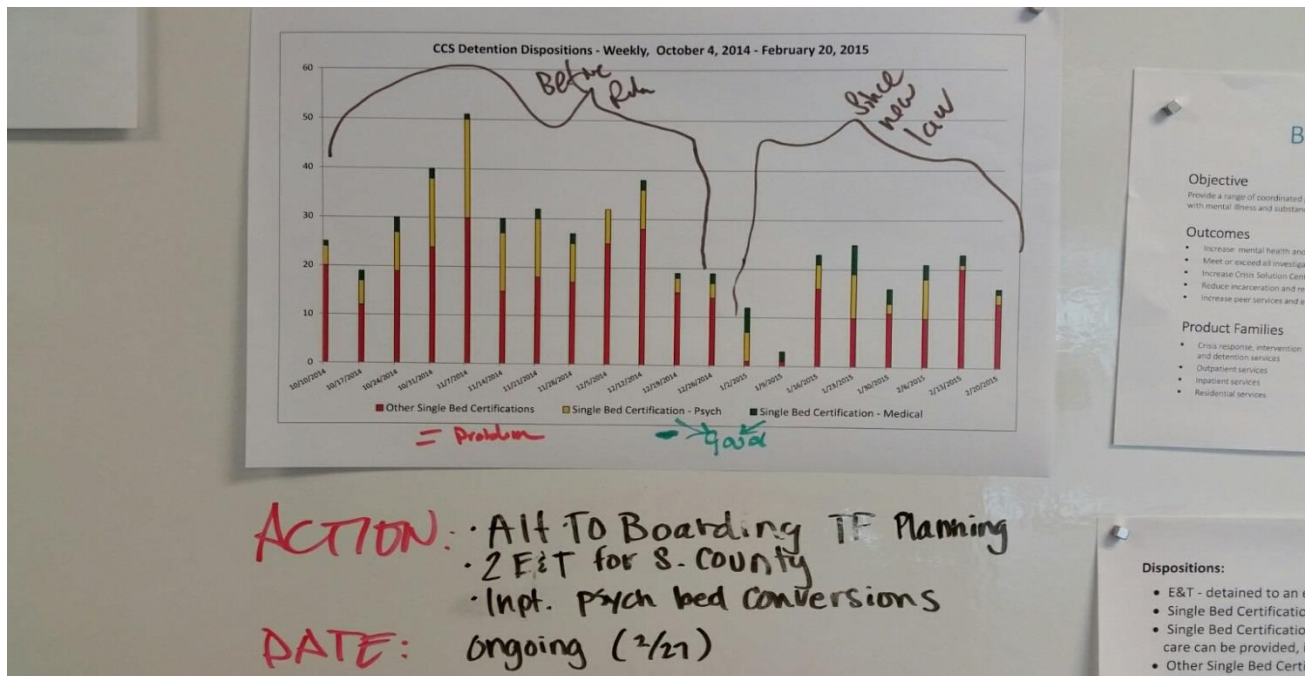


Figure 8

What works here?

- Drawing on the charts to clearly show the problem and how it has changed
- Action and date under the chart to show the process makes this data come alive.

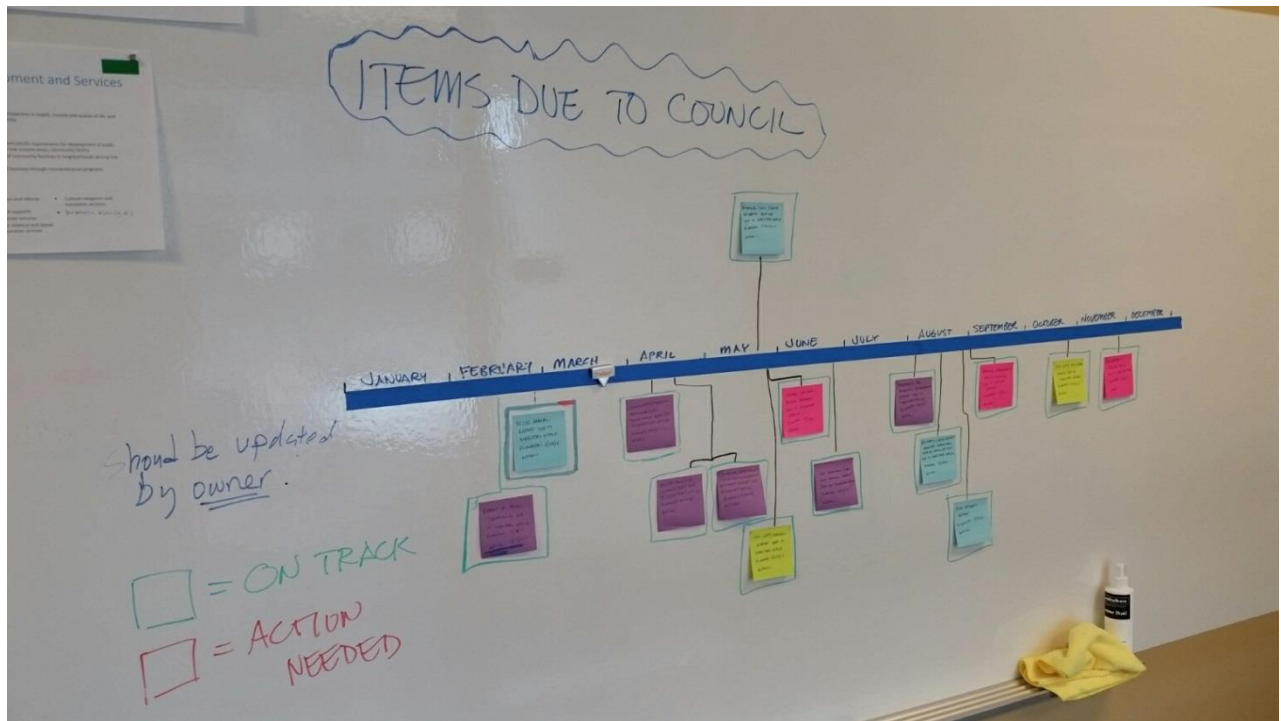


Figure 9

What works here?

- easily identifiable timeline that for responses to council that shows the status of each milestone at a glance



Figure 10

What works here?

- Integrating examples of clients served with the data.
- Categories that prompt action
- Writing next to charts and pictures

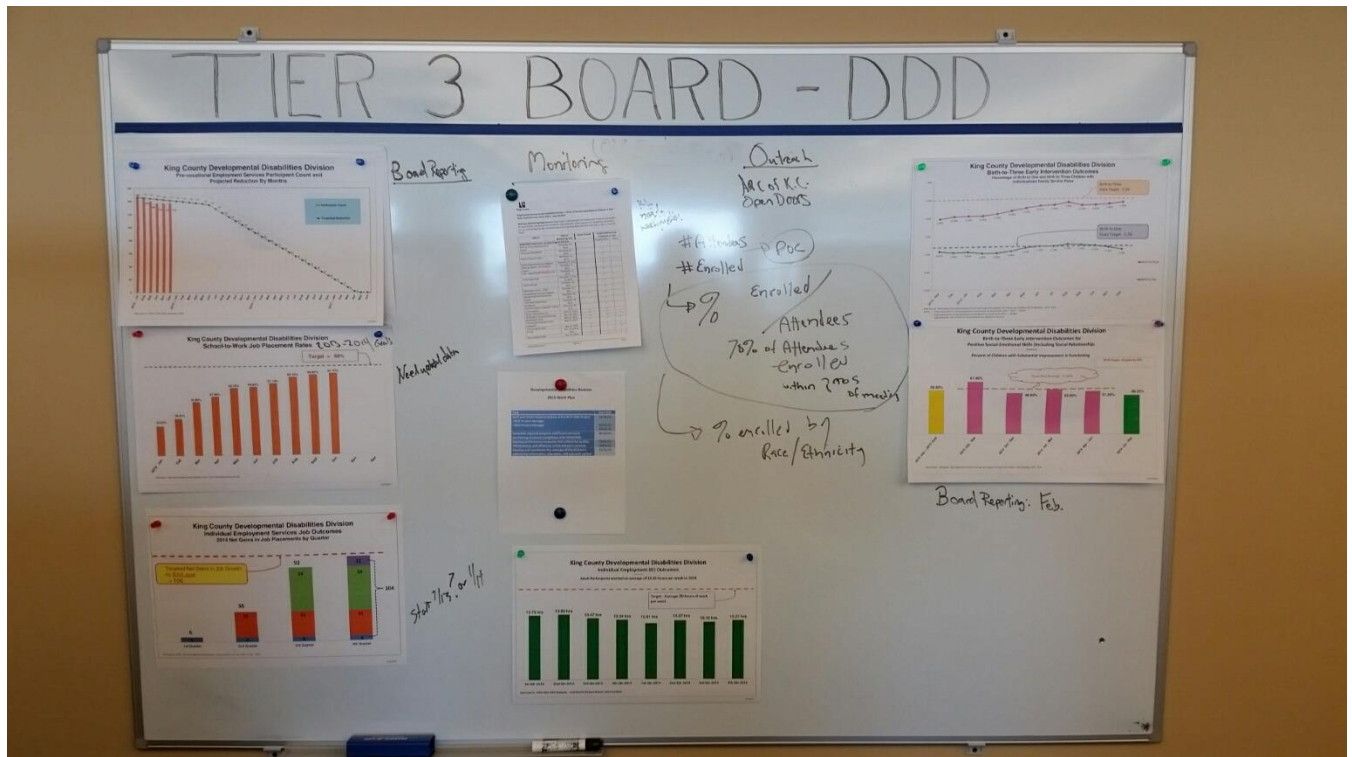


Figure 11

What works here?

- Colors help provide contrast between components
- Follow up items easily identifiable
- "Monitoring" section shows historical context

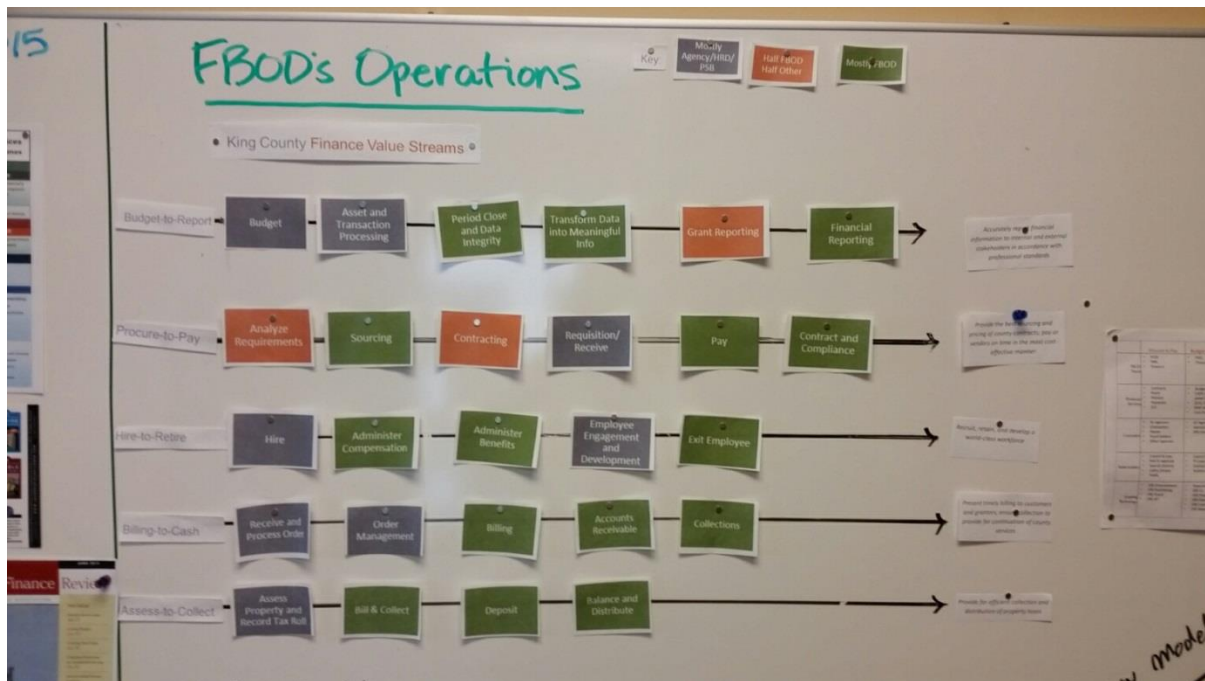


Figure 12

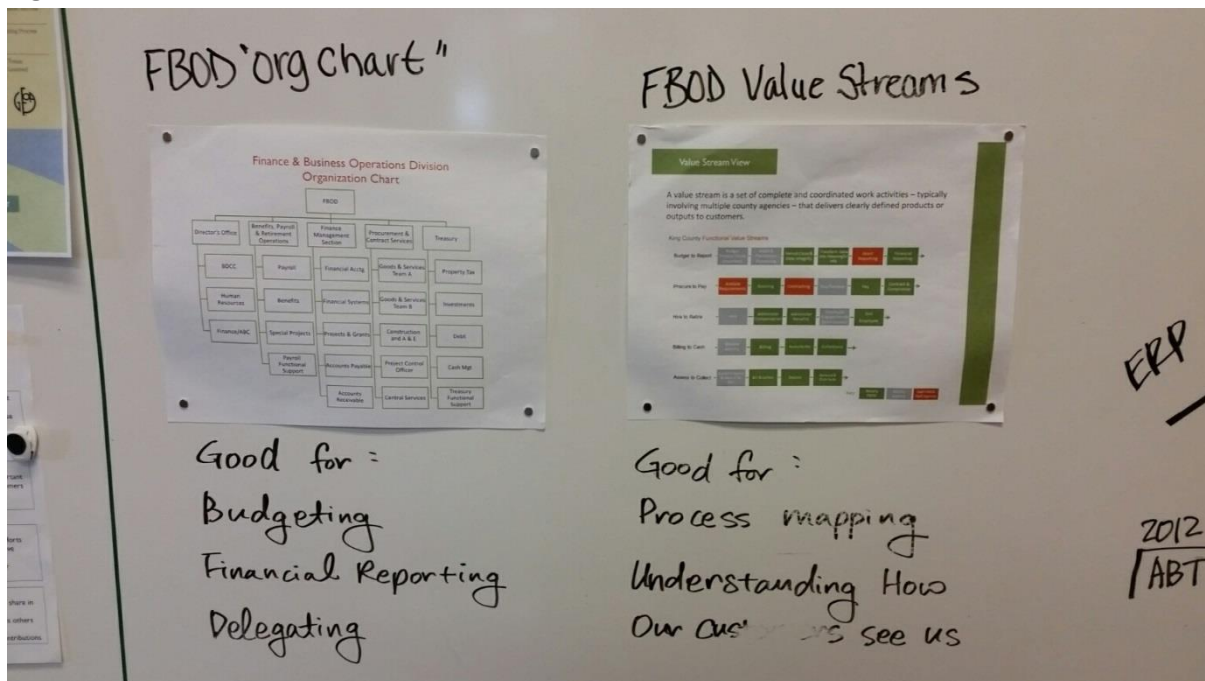


Figure 13

What works here?

- Shows clear value streams with role distinctions (Figure 12)
- Shows how the org chart aligns with value streams (Figure 13)

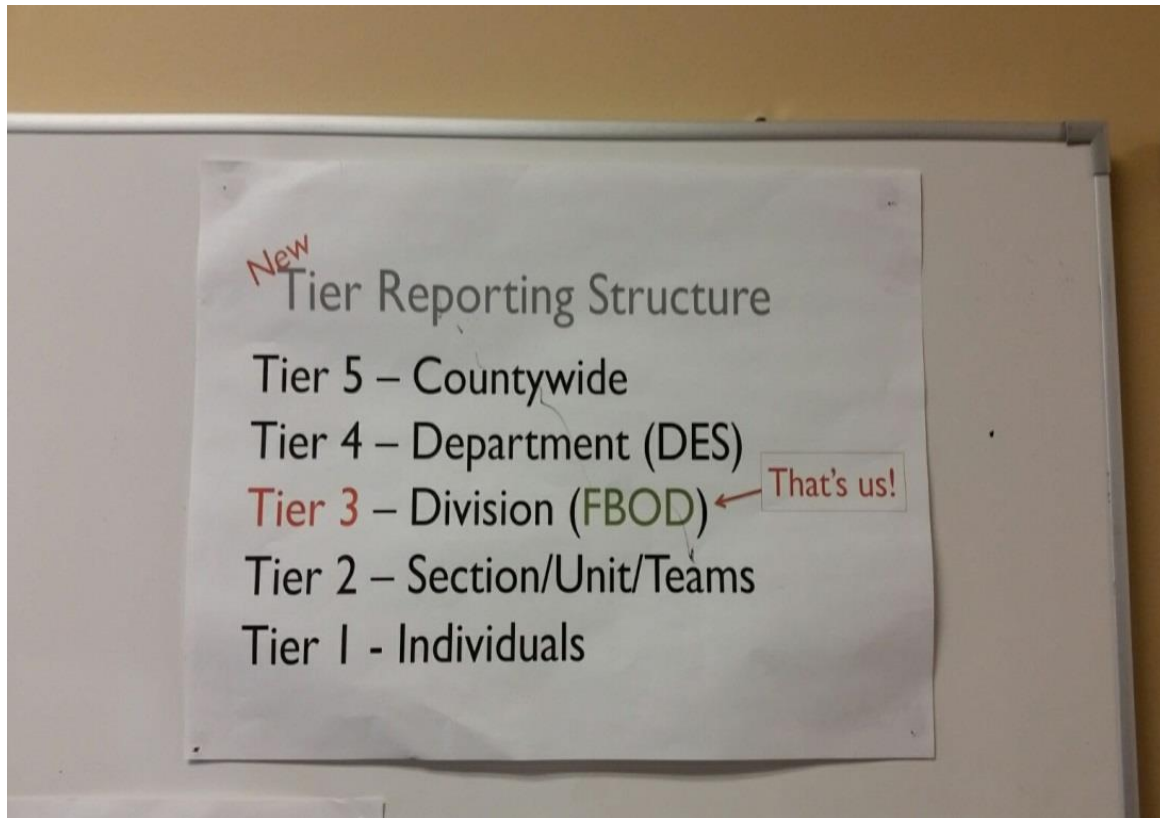


Figure 14

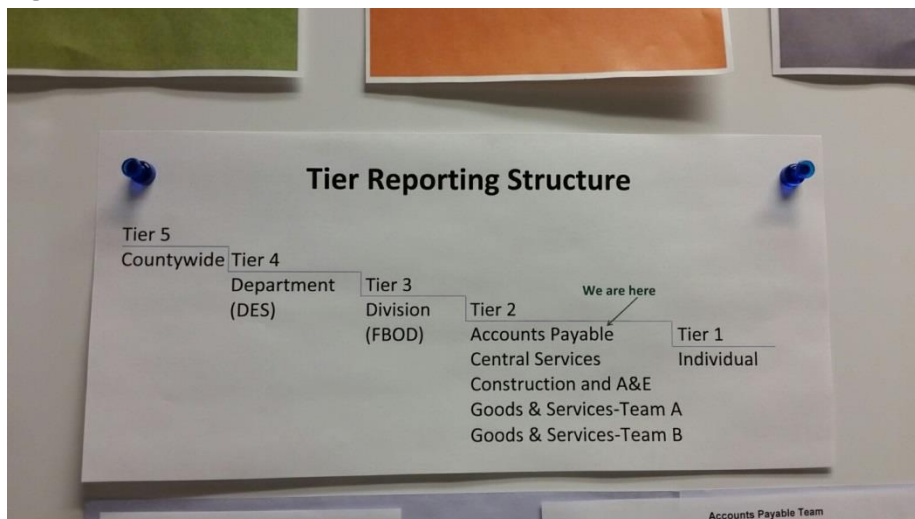


Figure 15

What works here?

- Clear legends that show what you are looking at and where you fit in the organization



Figure 16

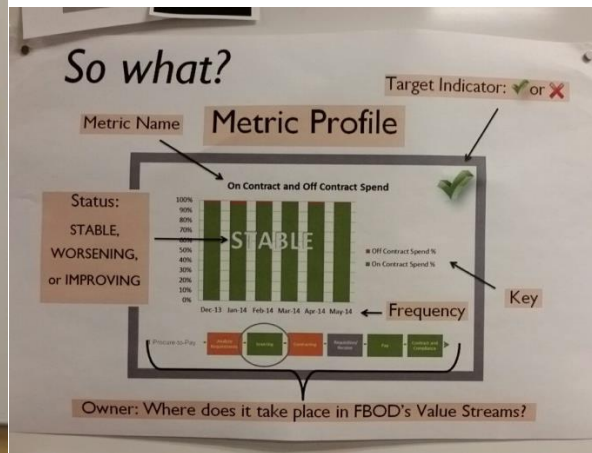


Figure 17

What works here?

- Gives context, shows the journey and why the board is important (Figure 16)
- Shows how to read the measure

Priority Projects

Project	Next Deliverables	Lead	% Completed	Status
Proviso Response Standardization for New Systems	Report due to Council 3/31	Carol Basile	40%	•
Enterprise System Standardization Initiatives	Proviso Initiatives	Project Manager	see →	see →
FBOD Lean	Expand AB Use/Coaching Huddles, Roundup, Visual Control Standardize Internal Processes	All Leaders	5%	•
Activity Based Costing Project	Select partner agencies, Develop ABC Models	Dave Turley Eugene Greenwald	5%	•
Procurement Reform 2.0/P2P Prototype	WTD Capital Streamlining Req. it Right	Danielle Hinz Sandy Hanks		
Mainframe Retest	Go Live!	Scott Matheson		
Strengthening Internal Control	Internal Control Policy, Risk assessment tool	Pete Anthony		
E-Payment				
Payroll Reem. & Over Payments		Mary Beth Short		

Figure 19



Figure 20

What works here?

- Shows priority projects and project completion in a clear and easily updatable way



Figure 21

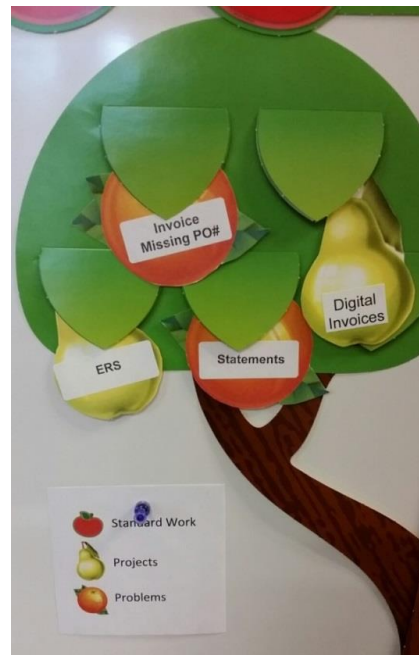


Figure 22

What works here?

- Shows standard and non-standard work in a fun way

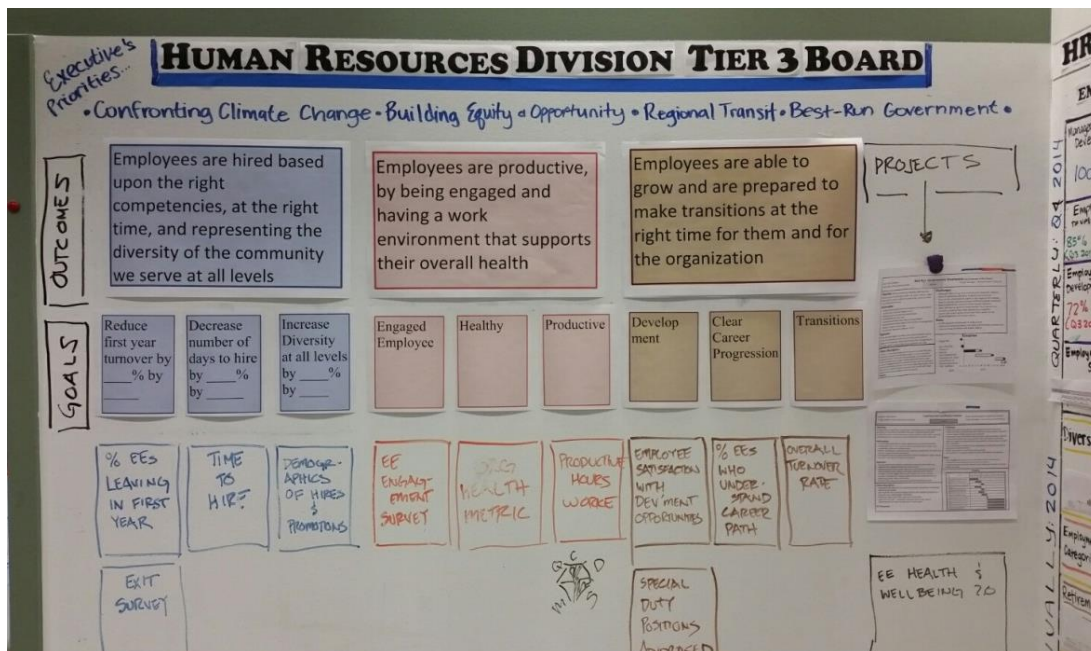


Figure 23

What works here?

- Shows development of outcomes, goals and measures for standard HR service delivery and how they all align

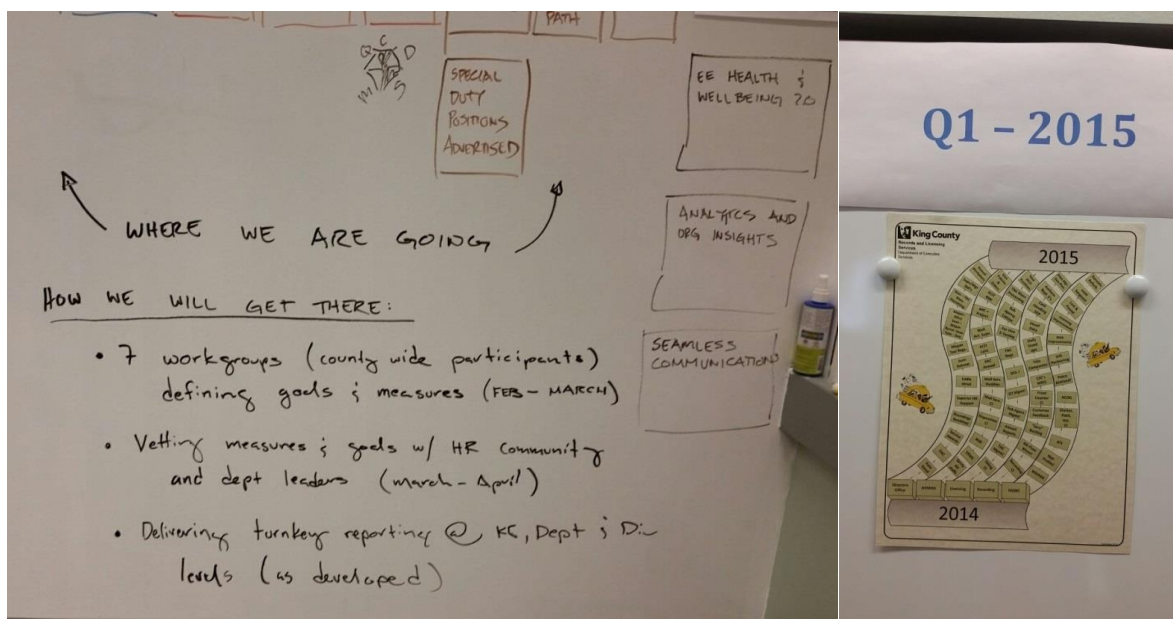


Figure 24

Figure 25

What works here?

- Clearly identifies roadmap for where the organization is going and how they plan to get there

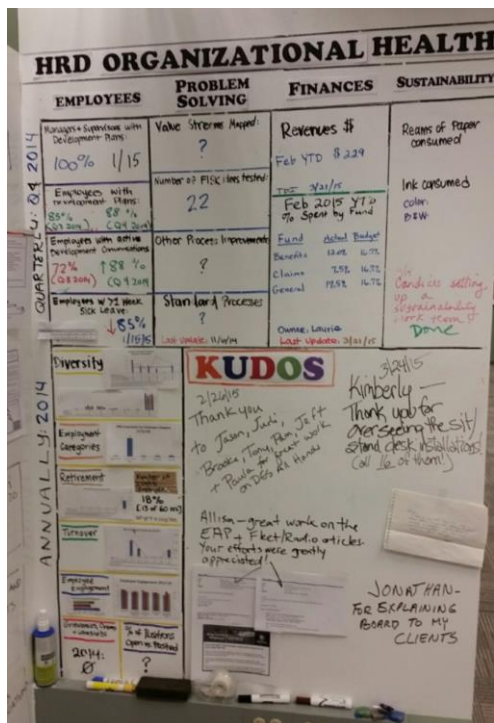


Figure 25

What works here?

- Shows alignment to the bigger picture
- Shows recognition for a job well done (Kudos section)



Figure 26

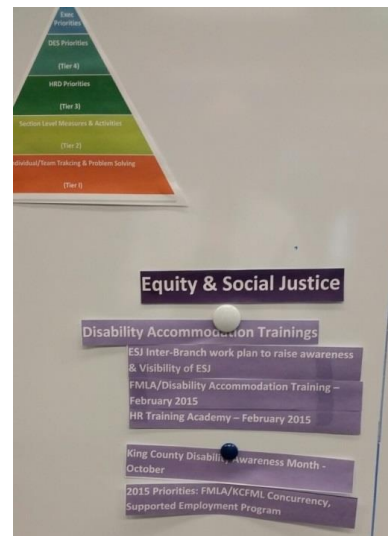


Figure 27

What works here?

- Aligning work to the Executive priorities