How do we know changes are an improvement?

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Agenda

Two ways to use data effectively

- Learning from what is
  - Case study example (Riverside)
  - Breakout – how would we get this data? What would be the right tools for analyzing this data
- Learning when change occurs
  - Review data session from LS3
  - Break out: two ways: identify and how to get this data? Or best practices in treating this data (building a baseline, baseline as a point of comparison, annotating permanent changes and significant events)

Data can help us in 2 ways

1. To identify places for learning from variation
   - Places where performance is unusually good
     (i.e., there might be some change ideas worth exploring/replicating/adapting)
   - Places where performance is unusually bad
     (i.e., where we might want to identify high leverage opportunities for improvement and/or quick wins)

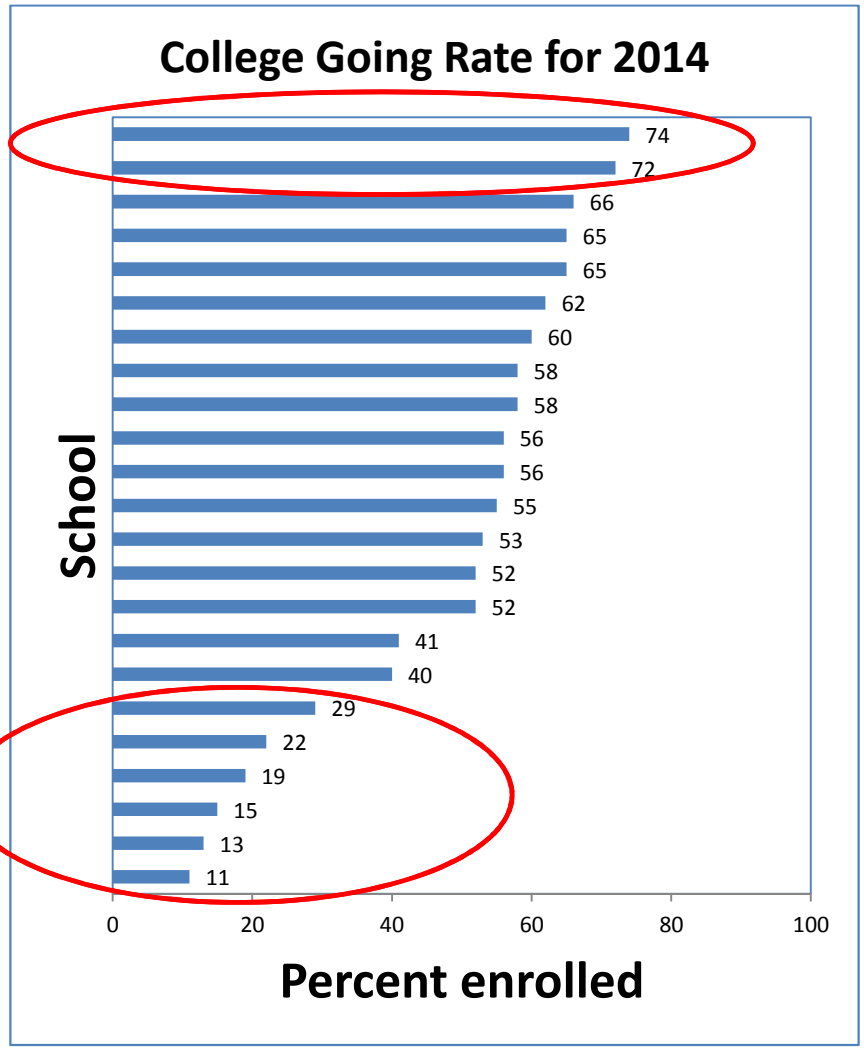
2. To indicate when improvement is occurring

Mini Case Study

- Problem: Low 2 and 4 year college/university enrollments from a county in California that has a high prevalence of people living below the federal poverty line

- Aim: Raise the 2 and 4 year enrollment rates from an average of 52% to 75% by June 2018 across 23 high schools (in 5 school districts)

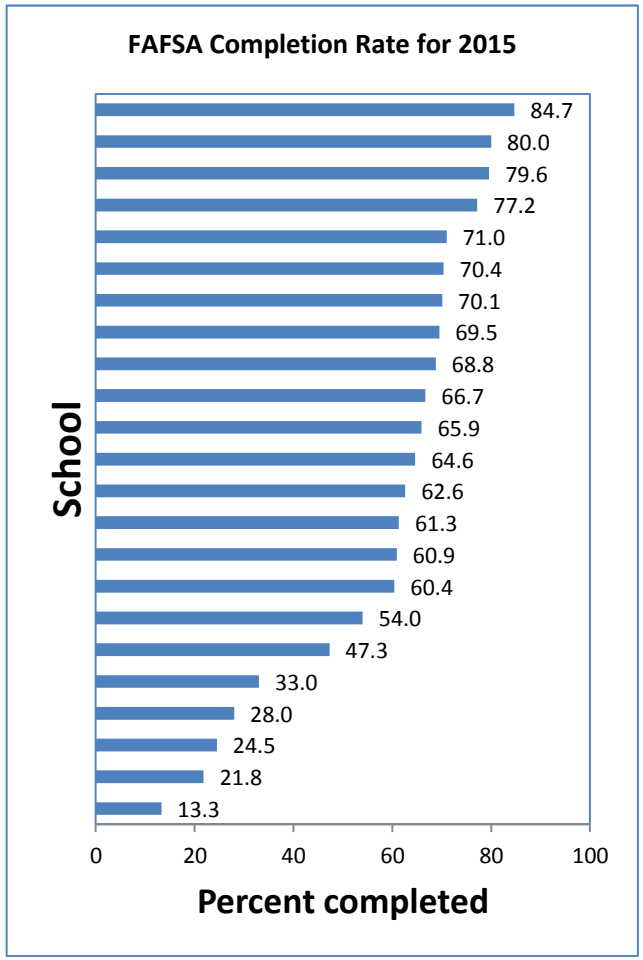
Outcome Measure

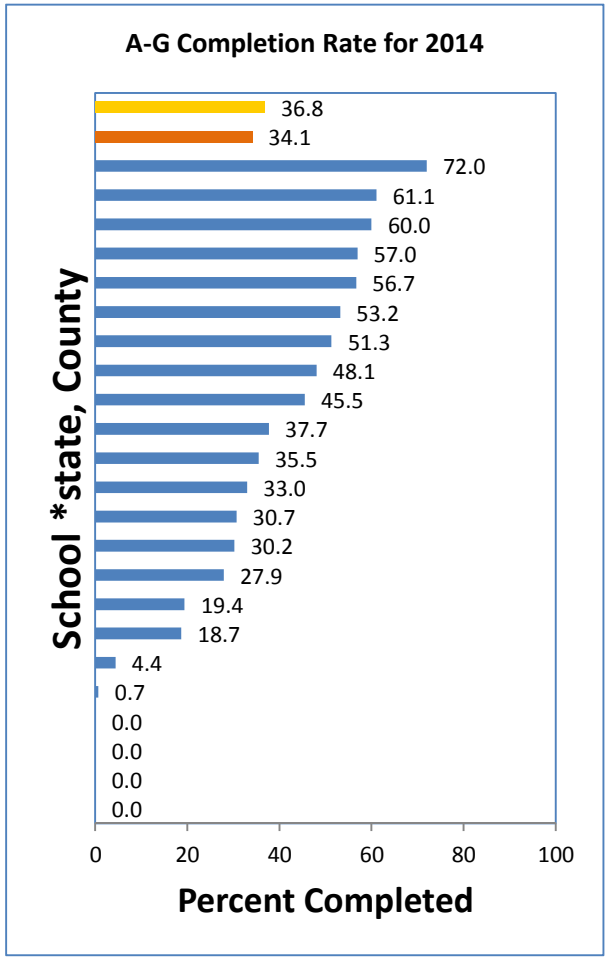


What can we learn from here?

That we might apply here

Process Measures





Ways to analyze this data

- Stratify the data in ways that allows you to see possible differences within sub-groups
  - By: location, gender, socio-economic status, ethnicity, time, provider, diagnosis, treatment, cohort, etc.
- Use Pareto Diagrams to order the data (as in our case example)
- Use Scatterplots to uncover possible relationships
- Use Run Charts to understand behaviors over time

Remember

- The variation we can learn from is not just between schools (inter school variation)

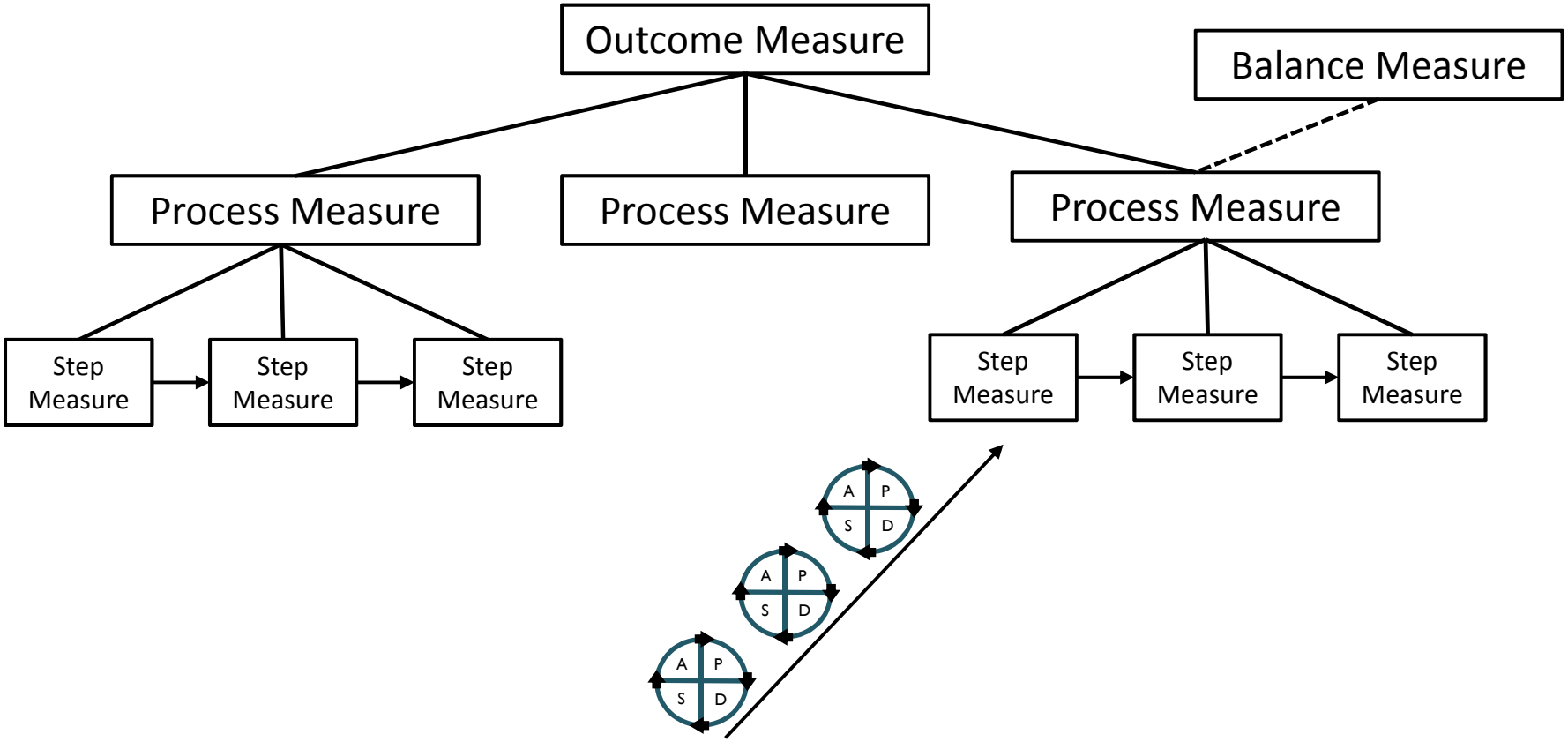
- It is also with in schools (intra school variation)
  - We can go to ask questions about why some students (very few) from very low performing schools do end up enrolling
  - We can also ask what is it about some (very few) students in high performing schools do not enroll

Break out

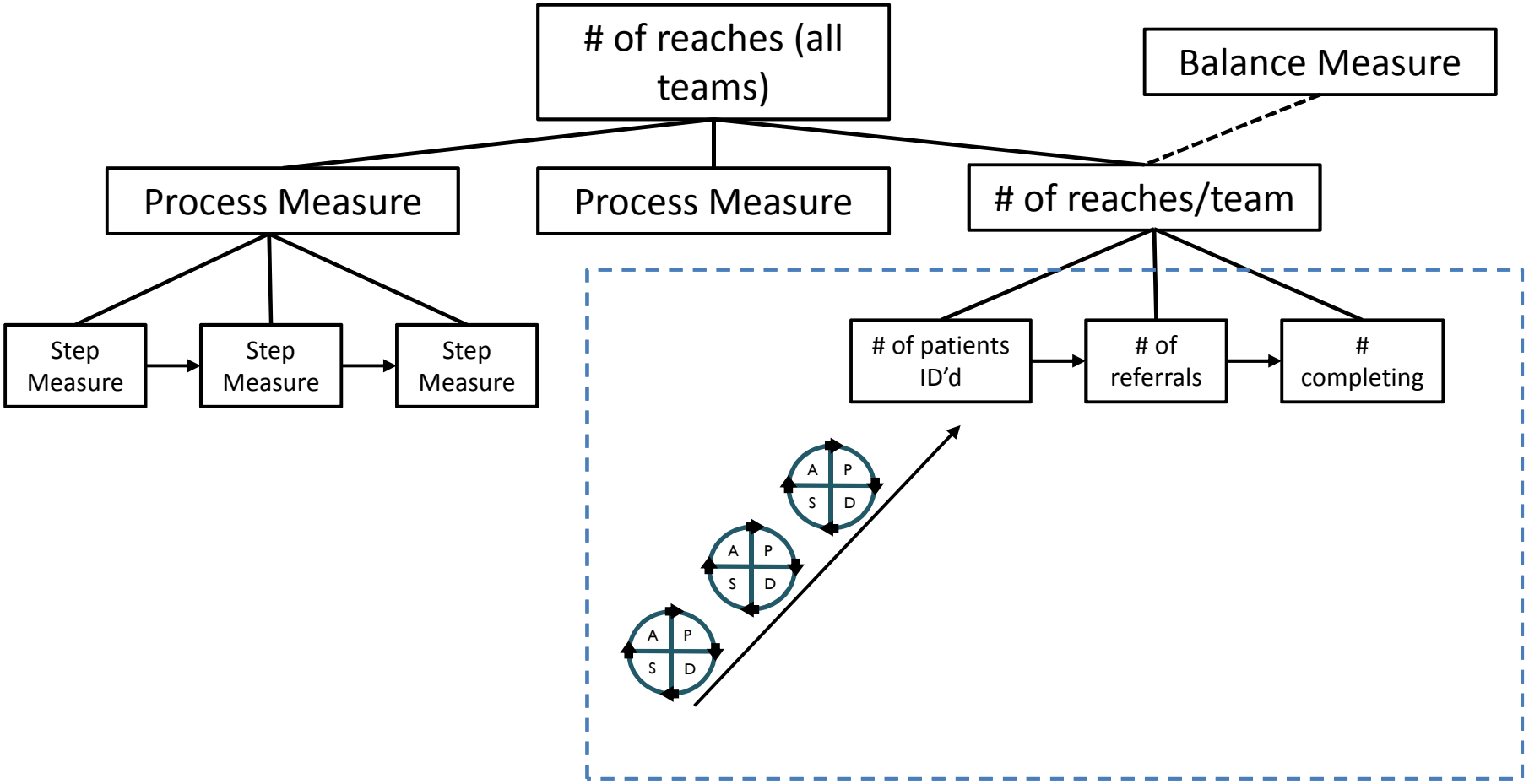
- How would we get data that can help us learn from the variation in our communities, our patient populations, our general practices?

- Formulate a process to gather and analyze this data
  - Who will gather it?
  - When will they do that (one time or ongoing? Certain day of the week? Etc.)
  - What would be the right tools for analyzing this data (not sure, just ask your IA, we are here to help)

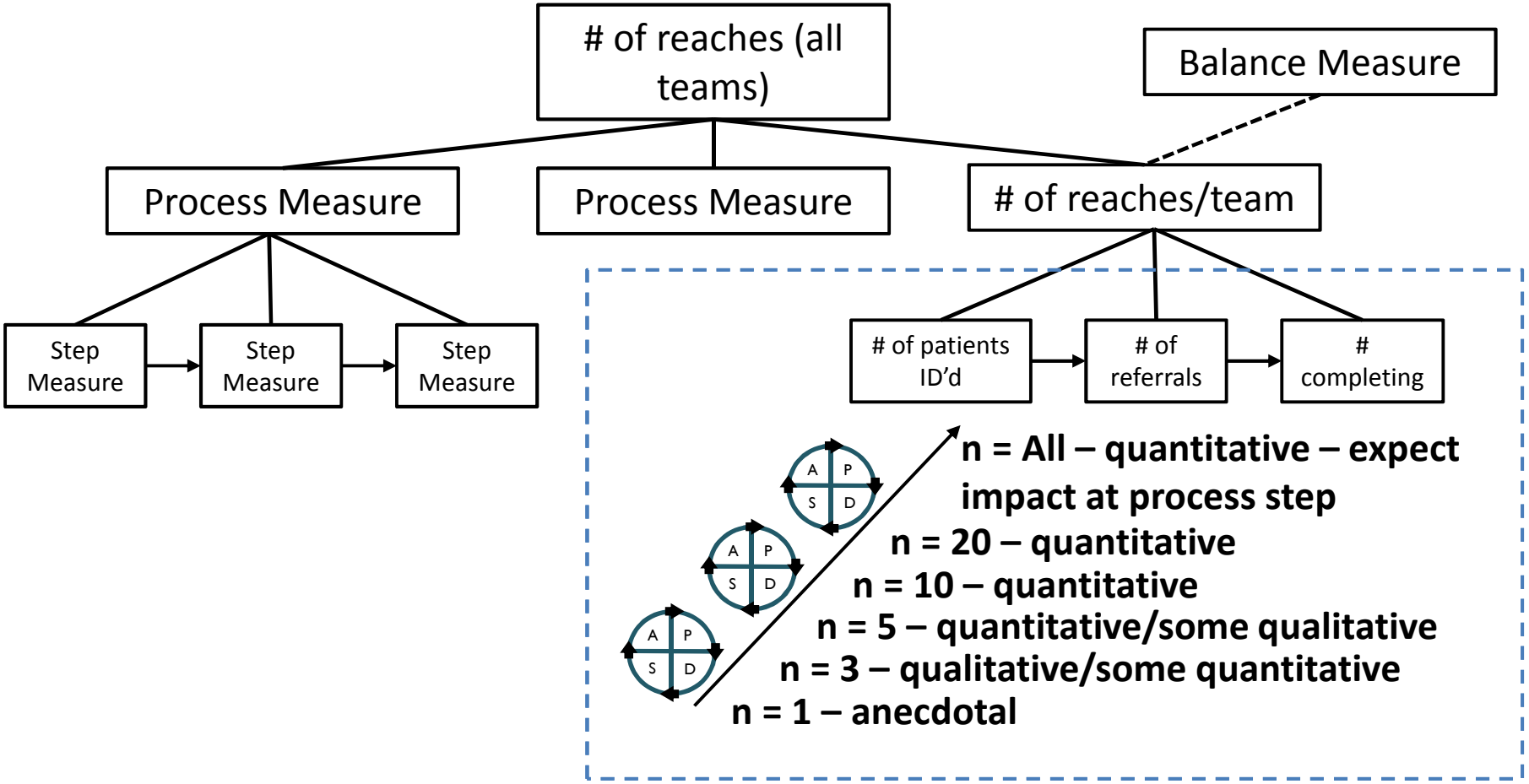
Measurement Tree



Measurement Tree

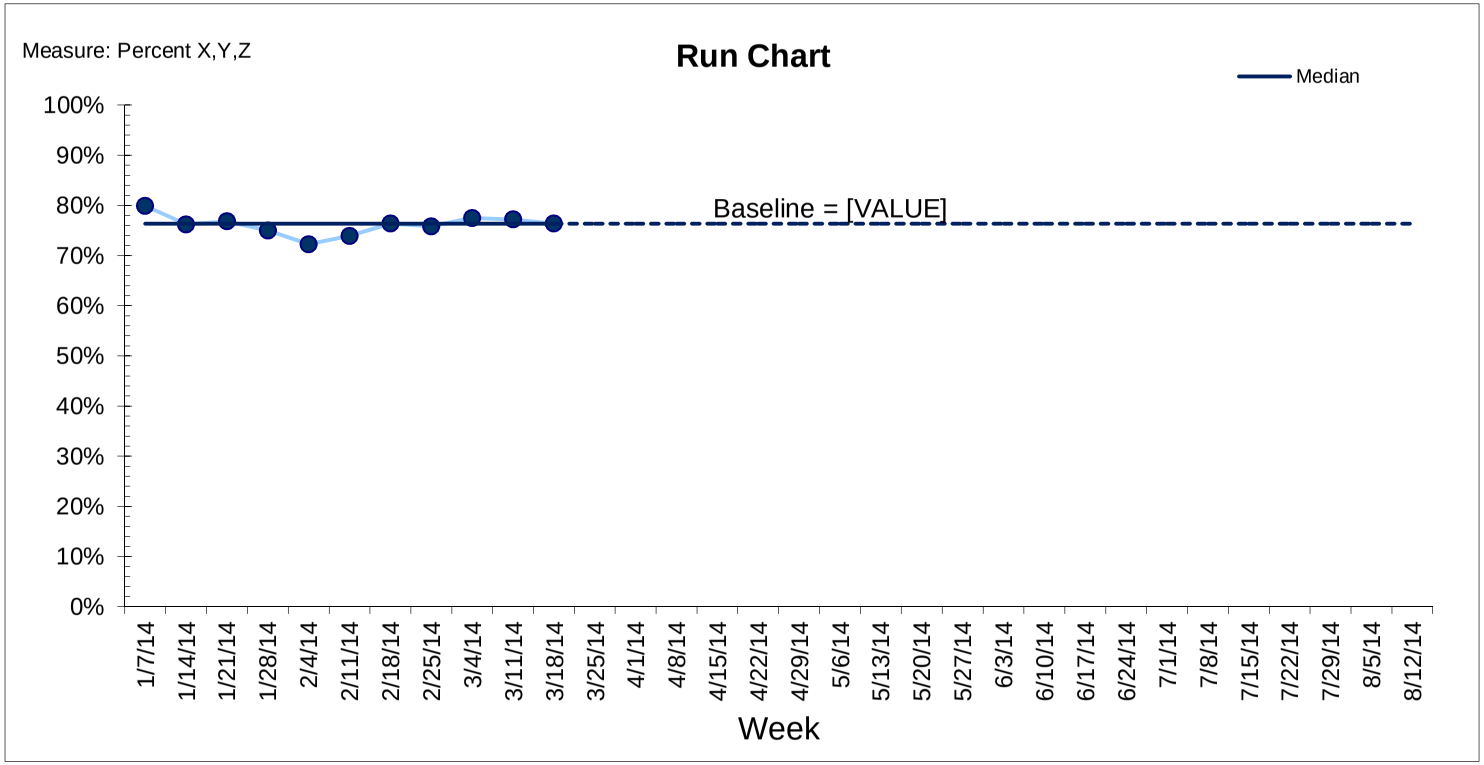


Measurement Tree

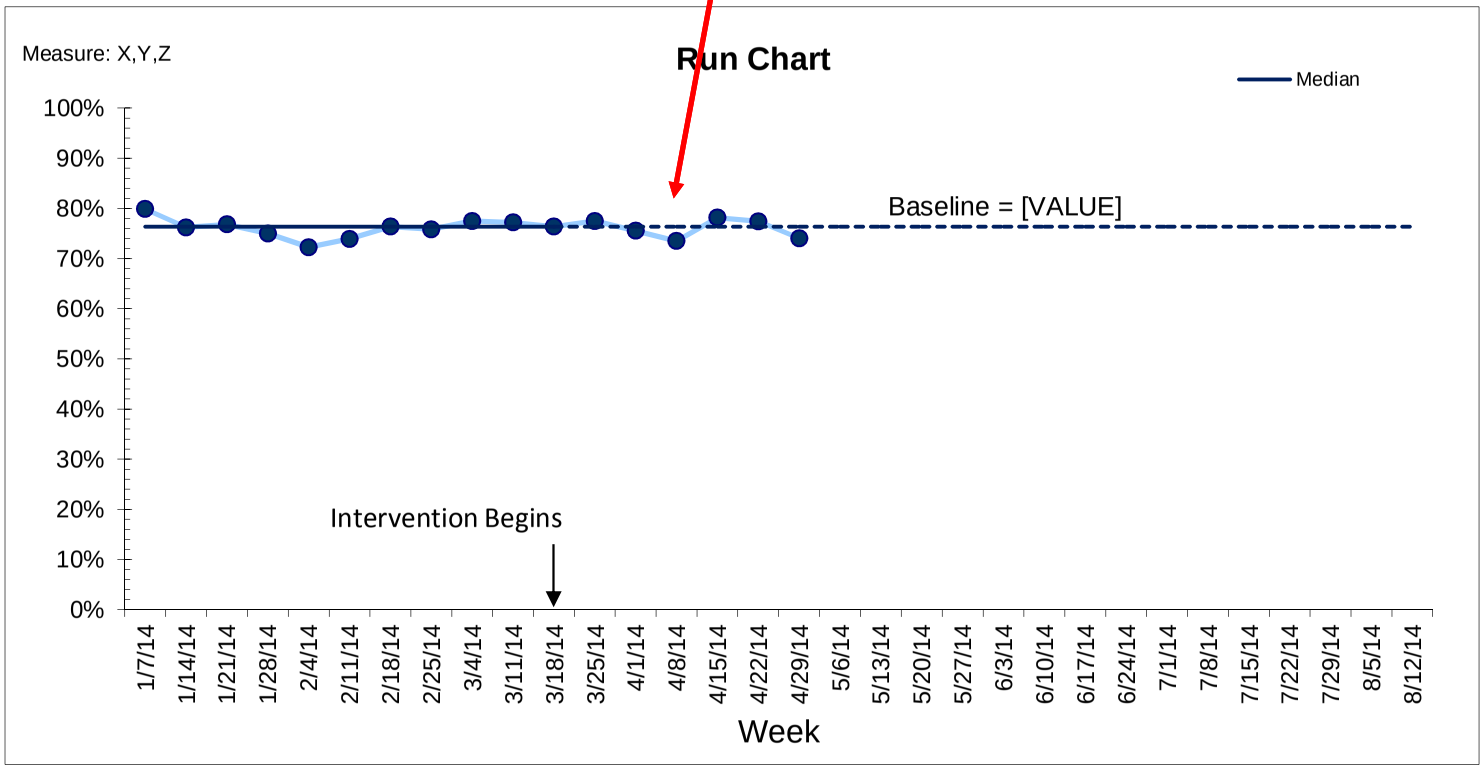


When we get to all (permanent change) we might expect to see changes in out Run Charts

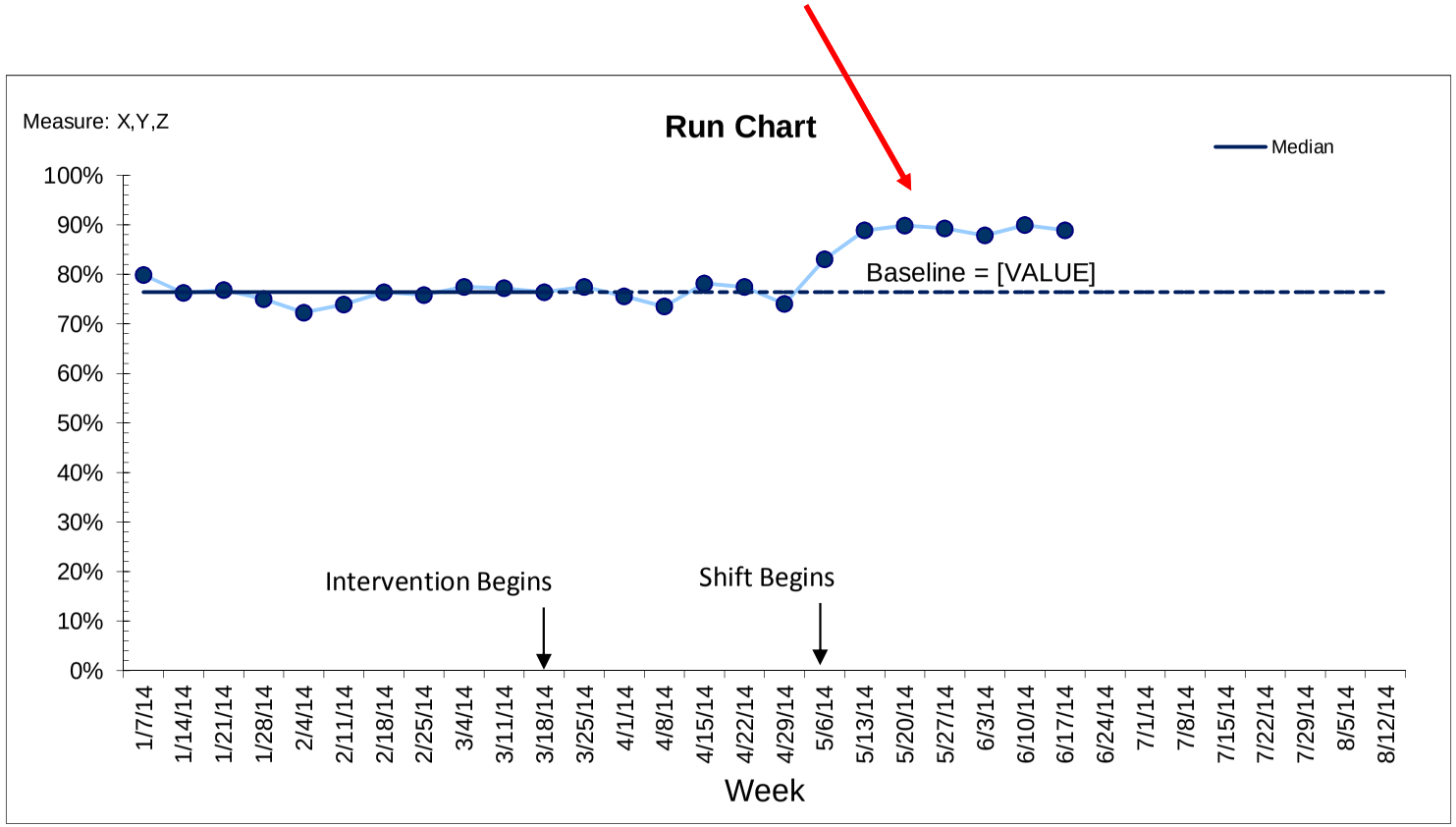
WHAT DOES THAT LOOK LIKE?


Measure: Percent X,Y,Z
Run Chart
Median
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Baseline = [VALUE]
1/7/14
1/14/14
1/21/14
1/28/14
2/4/14
2/11/14
2/18/14
2/25/14
3/4/14
3/11/14
3/18/14
3/25/14
4/1/14
4/8/14
4/15/14
4/22/14
4/29/14
5/6/14
5/13/14
5/20/14
5/27/14
6/3/14
6/10/14
6/17/14
6/24/14
7/1/14
7/8/14
7/15/14
7/22/14
7/29/14
8/5/14
8/12/14
Week

Notice: No change yet in the median



Notice: We see a shift here, because we continue to use the baseline for comparison (prediction)



THE DATA MUST SPEAK FOR ITSELF!

Break out

- How would we get the data to help us develop Run Charts, so we might learn if and when improvement is occurring in our projects?

- Formulate a process to gather and analyze this data
  - Who will gather it?
  - What is the regular process we will use to collect this data?
  - What would be the right tools for collecting this data? Do we need to create them (check sheets, excel spread sheets, queries of an existent database, etc.)

- If we have data in the form of run charts, review it for the principles we just discussed
  - Are we using our baseline correctly to understand the performance present in our data?
  - Do we have careful annotations denoting when changes have tried/made or important events have occurred?

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SUPPORTING WELLNESS

Thank you

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