

Keep your promises

**with Predictability**

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Devopsdays  
Mountain View 2011



# Demand Analysis

- Describe customers & their needs
  - Define types of work
  - Arrival Rate (seasonal fluctuations?)
  - Expectations for delivery
- Describe Sources of Internal Dissatisfaction
  - Variability that randomizes the process
- Describe Sources of Customer Dissatisfaction
  - (or points of customer conflict)

Customers will prefer  
**predictability** on  
a 15 day promise

***over*** unpredictability on  
a 10 day promise

Management  
wants  
***Predictability***

**100%  
UPTIME**



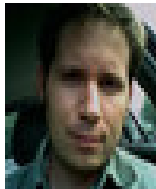
I PROMISE TO

I PROMISE TO

I PROMISE TO

I PROMISE TO

I PROMISE TO



**allspaw** John Allspaw

Cuss Index: the value of a perf improvement is proportional to the inappropriate language used when discussing it. [#velocityconf](#)

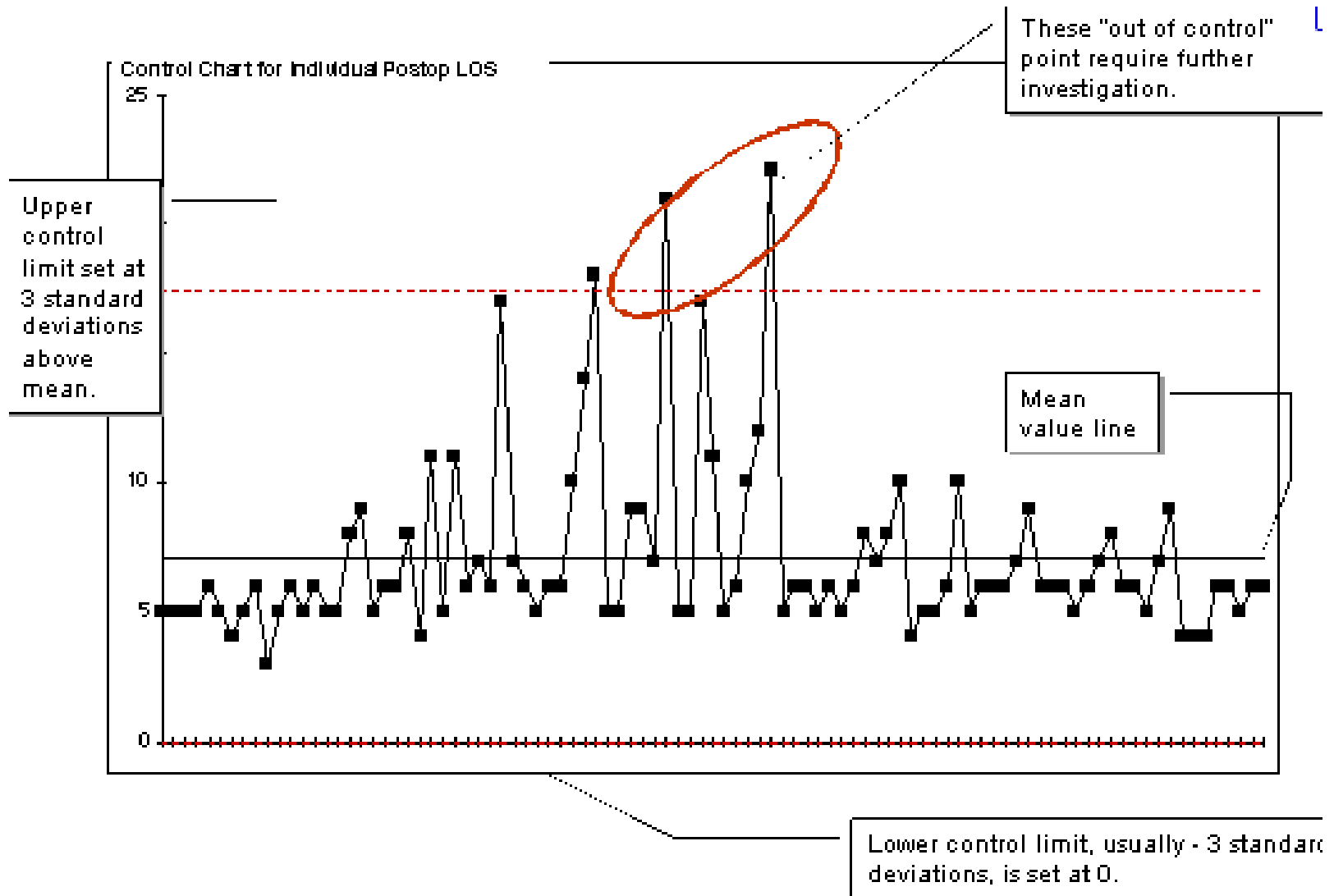
8 hours ago

You can't have  
a **logical** discussion  
with an  
**emotionally**  
Charged person

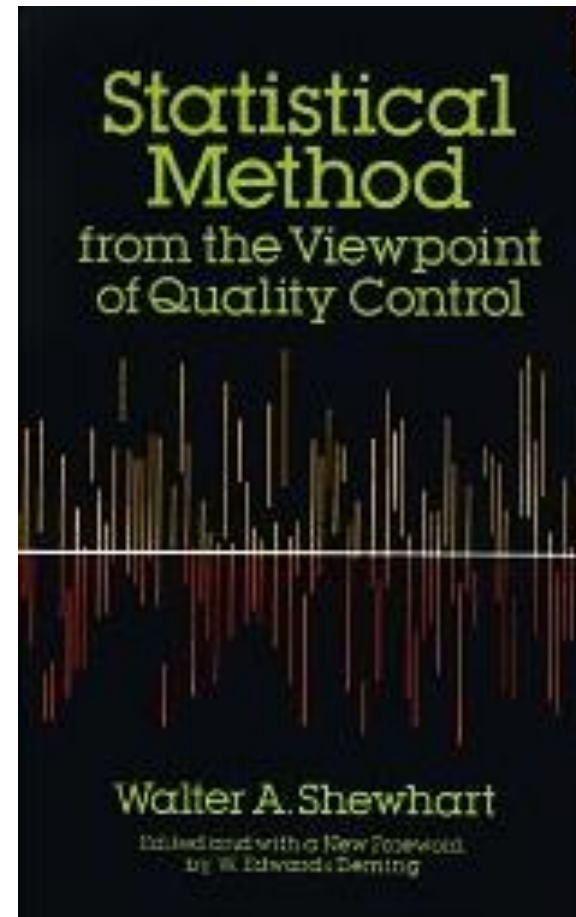
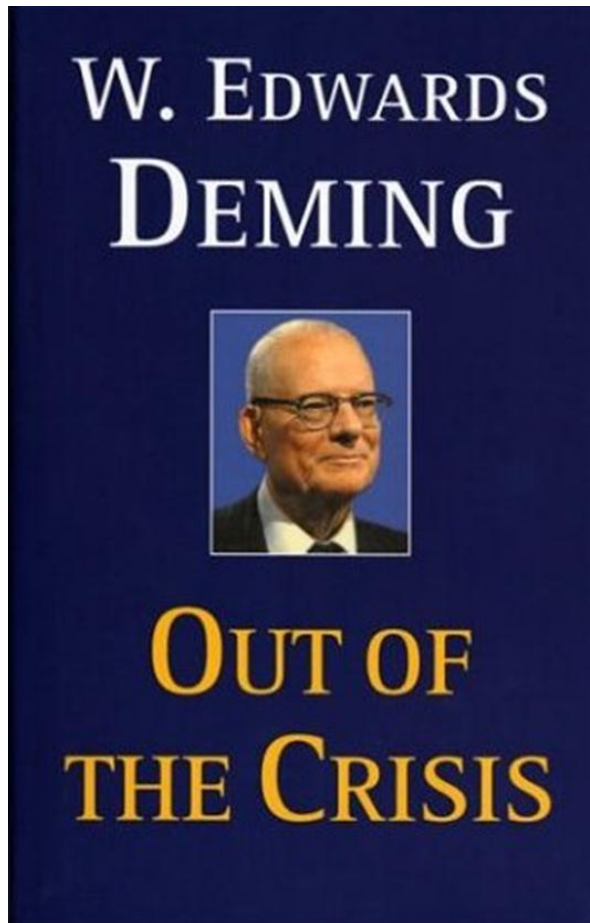
Being more predictable begins  
with **studying** the events in  
your realm that are  
unpredictable.

Study the **variability!**

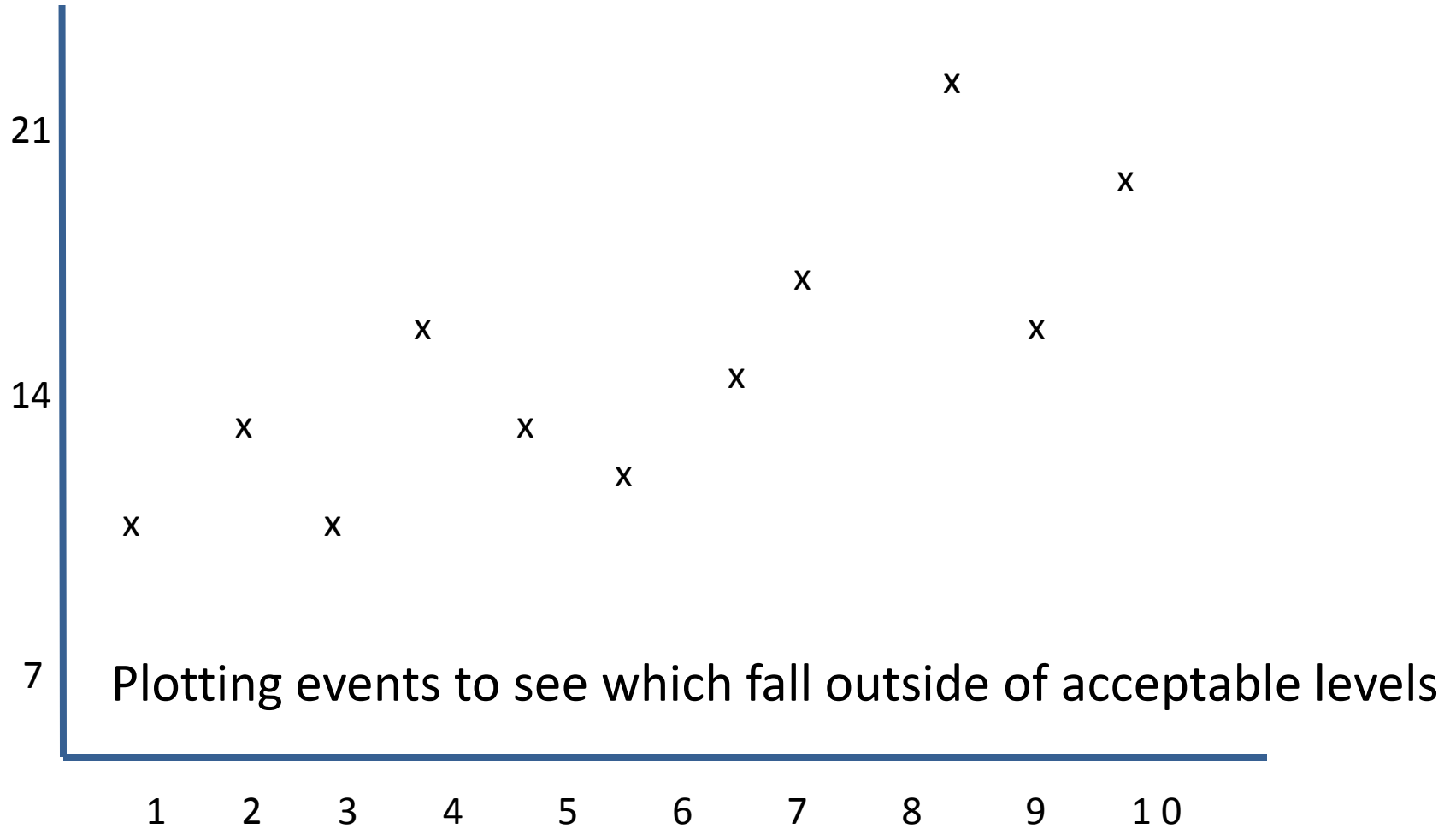
# Statistical Process Control chart



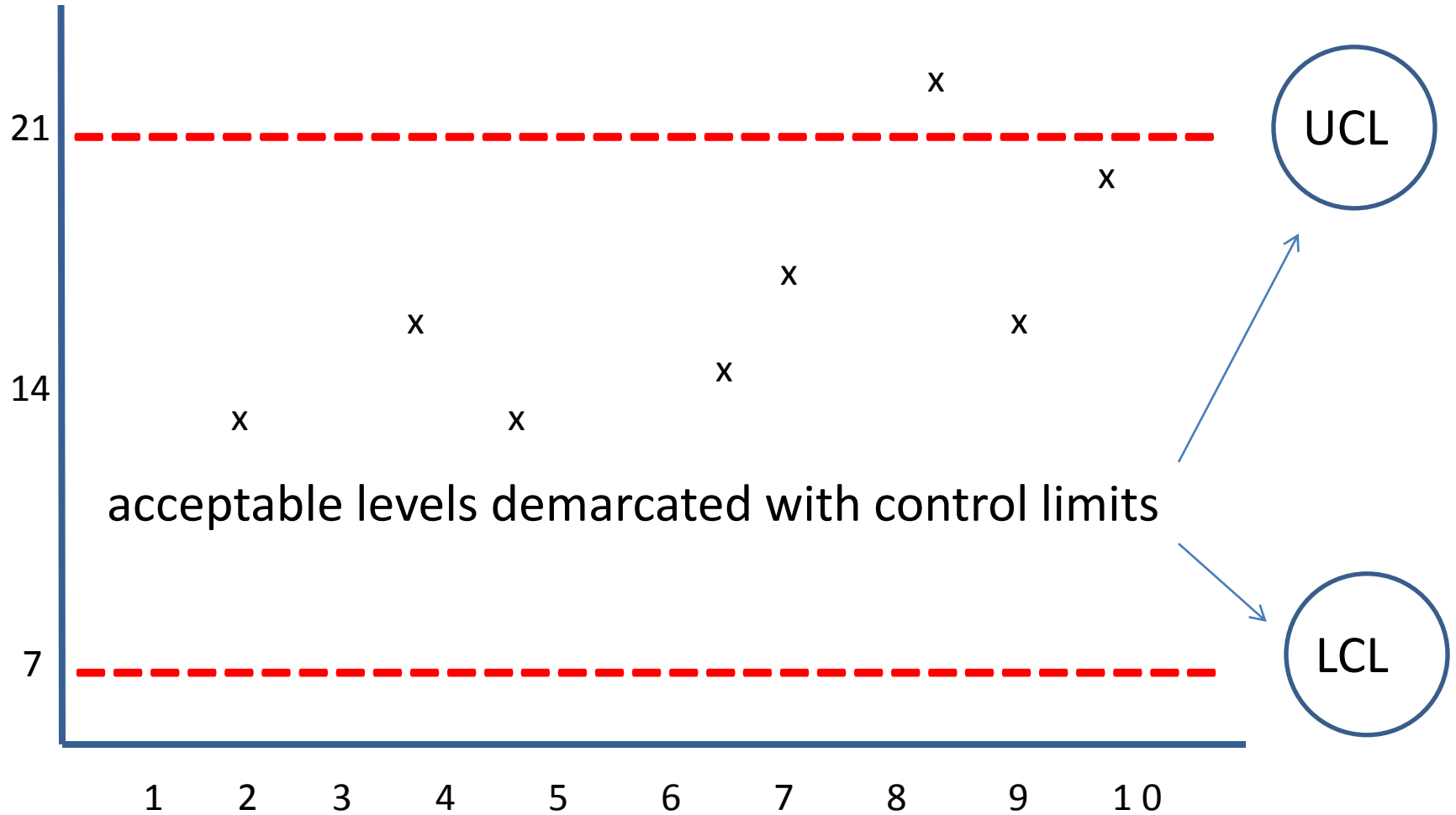
# Books on Statistical Process Control Edwards Deming and Walter Shewhart



# Statistical Process Control chart

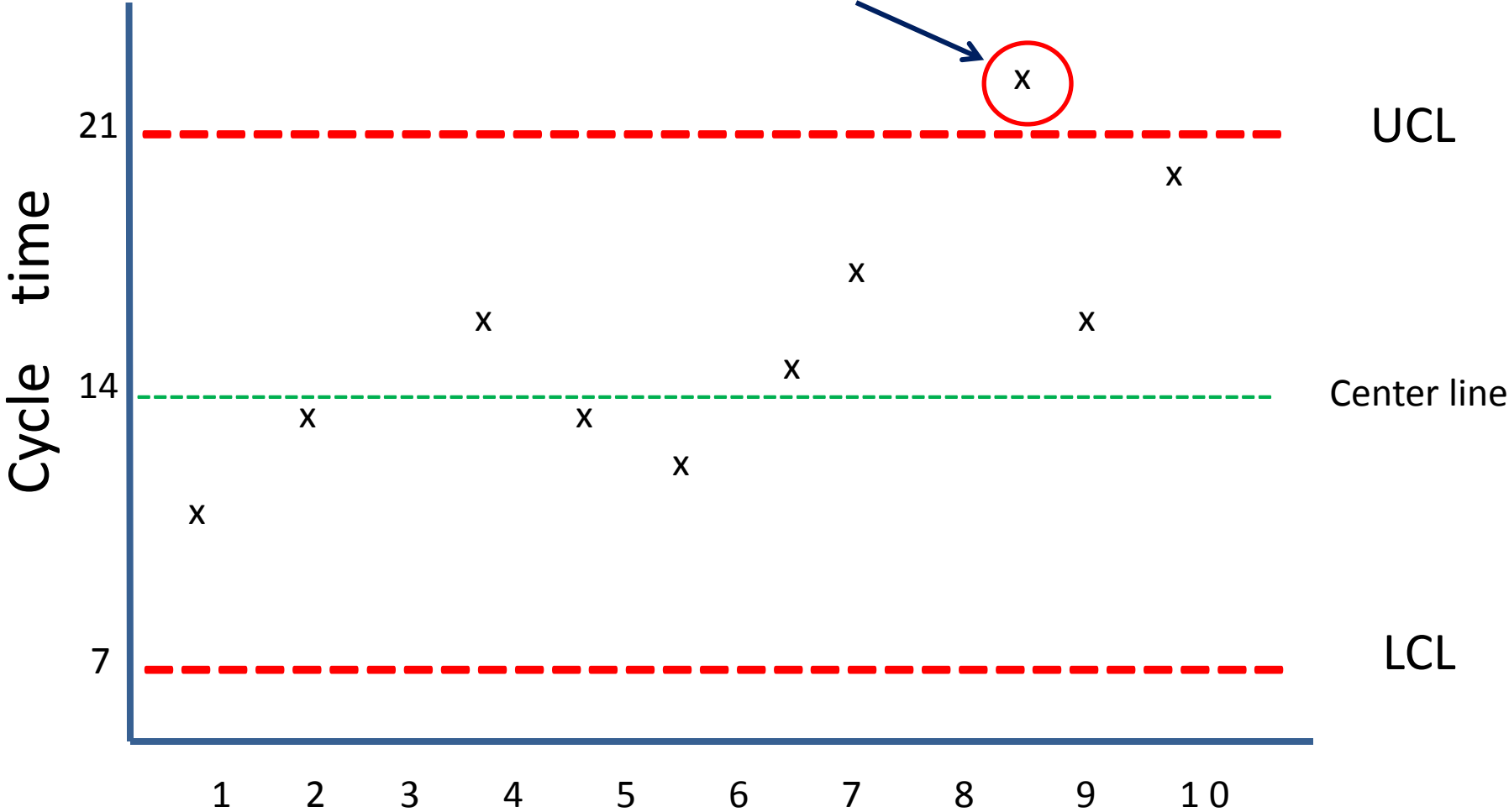


# Statistical Process Control chart



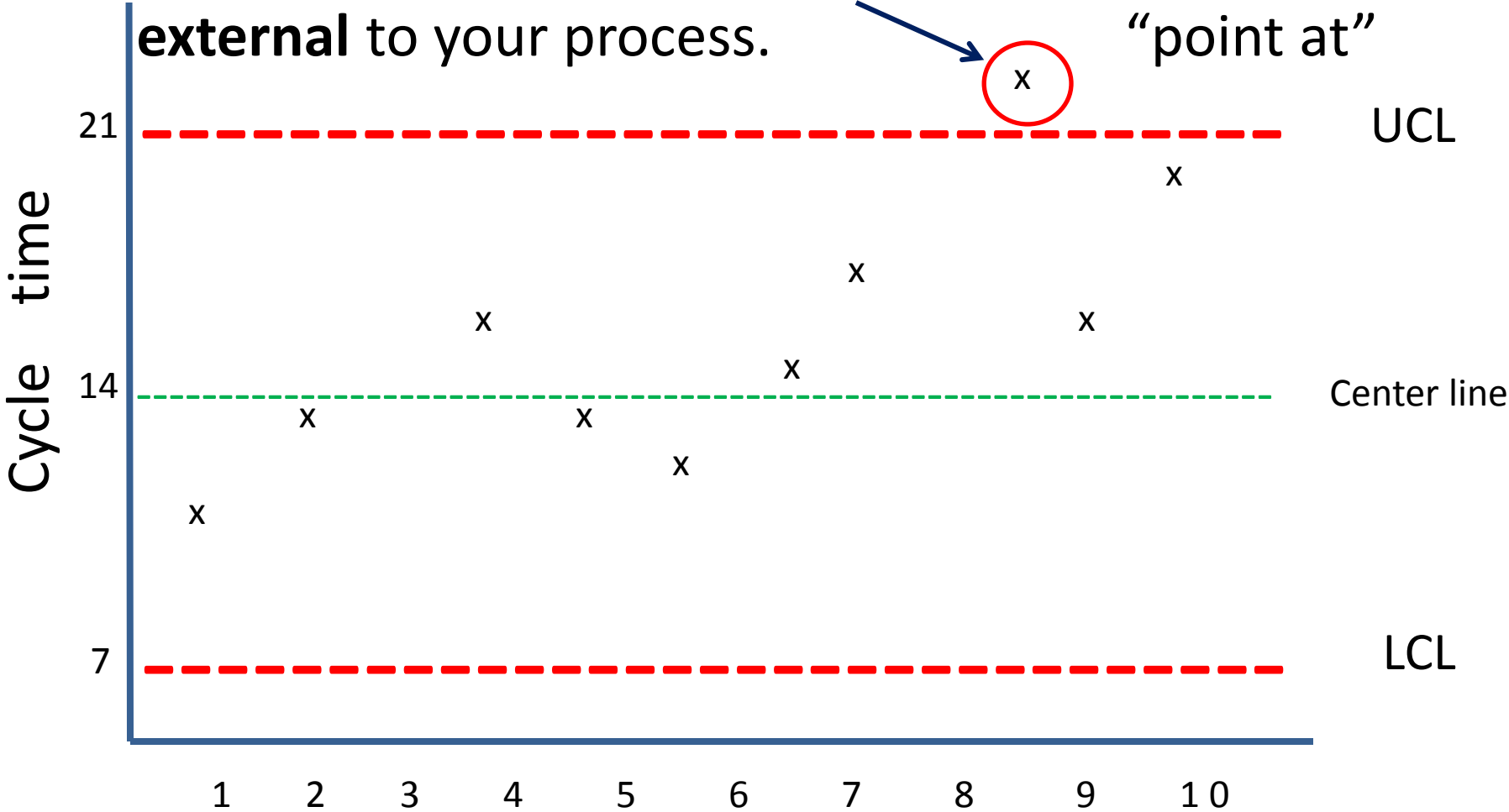
# Statistical Process Control chart

Special/assignable cause variation



# Statistical Process Control chart

Special/assignable cause variation is typically **external** to your process.



Like an Amazon EC2 outage that brings down your website.

APRIL 21, 2011 6:12 AM PDT

## Amazon cloud outage derails Reddit, Quora

Amazon is currently experiencing a degradation. They are **working on it**.

**reddit is down.**



Reddit was hampered by the AWS outage.

(Credit: screenshot by Stephen Shankland/CNET)

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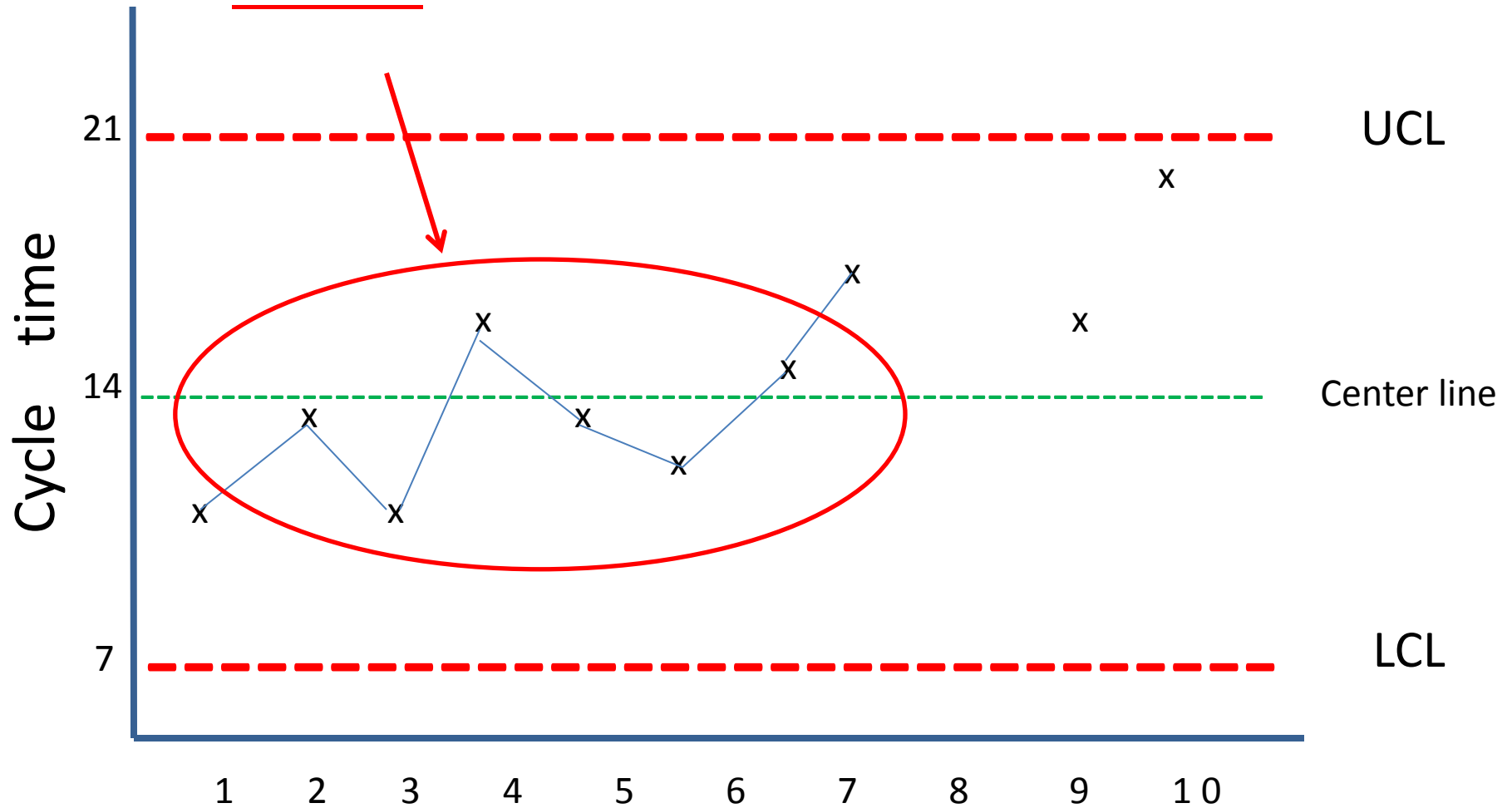
Special cause variations should be addressed with risk management:

- mitigation
- reduction
- contingency planning

# Statistical Process Control chart

Variation among the points within the limits

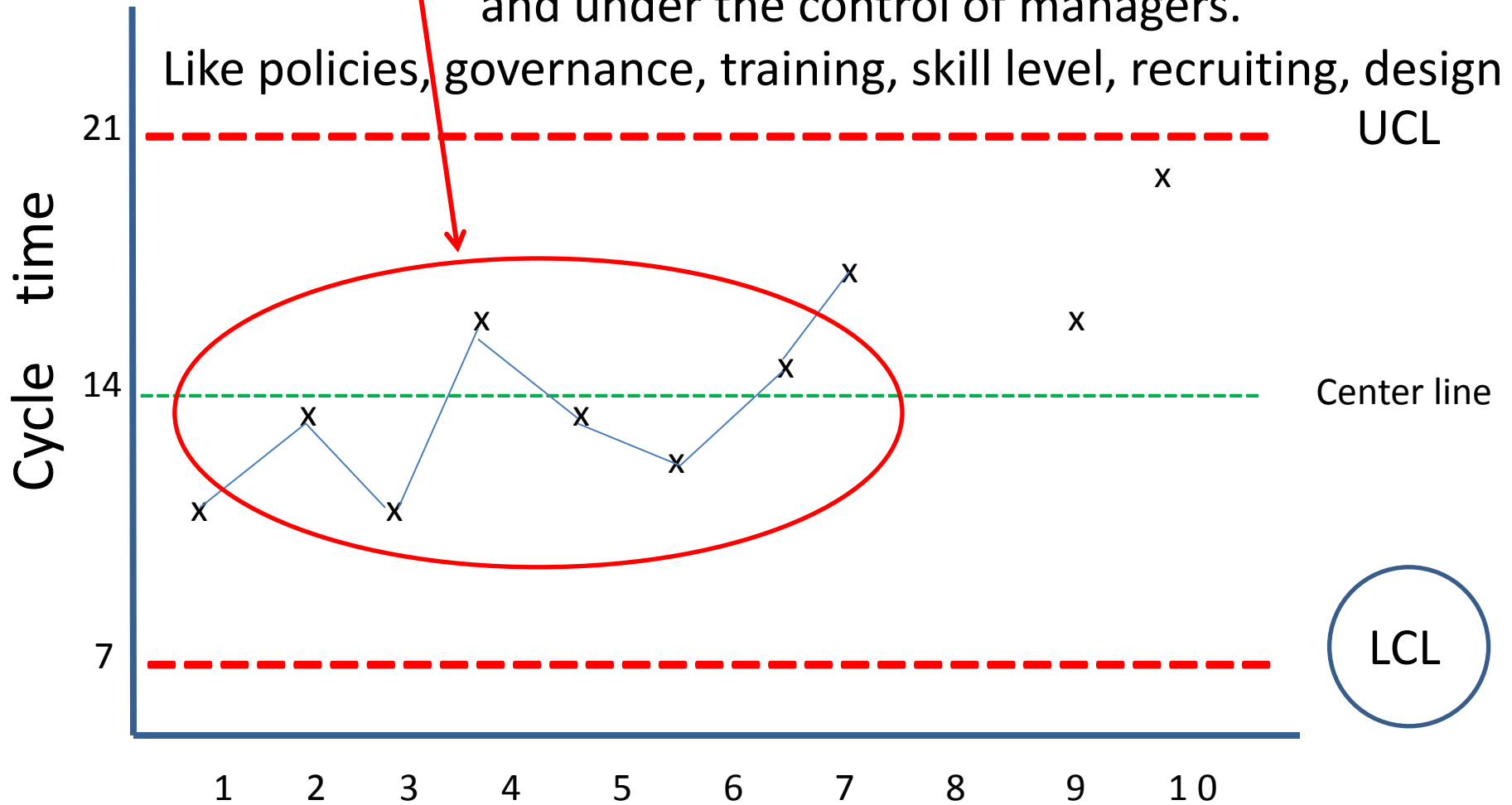
Chance or common cause variation



# Statistical Process Control chart

Chance or common cause variation tends to be internal to the team and under the control of managers.

Like policies, governance, training, skill level, recruiting, design



Control charts **show** where  
the process is unpredictable.

**Driving out  
variability** in your system  
results in greater  
**predictability!**

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