

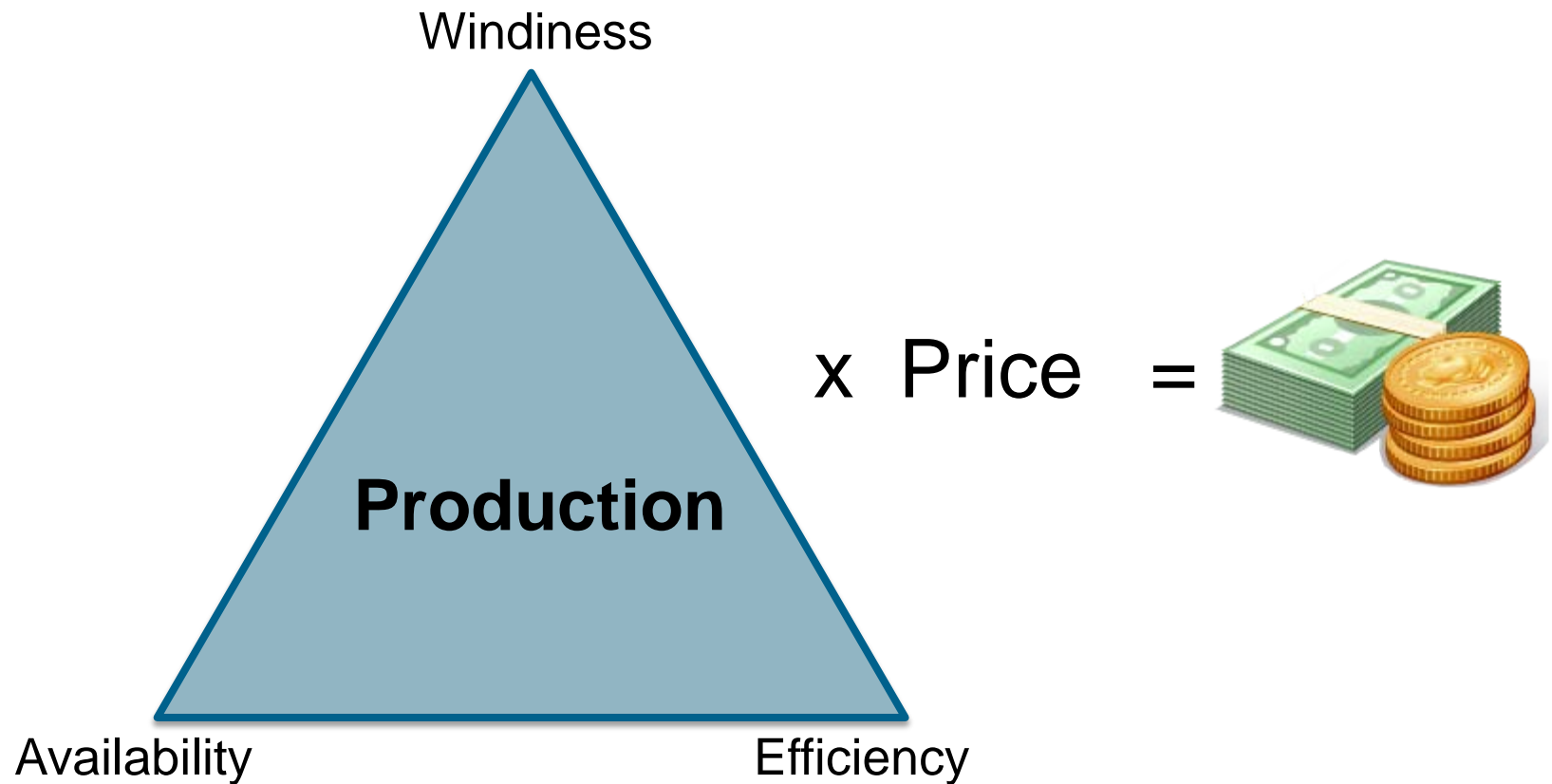
## What is the Cost of Availability?



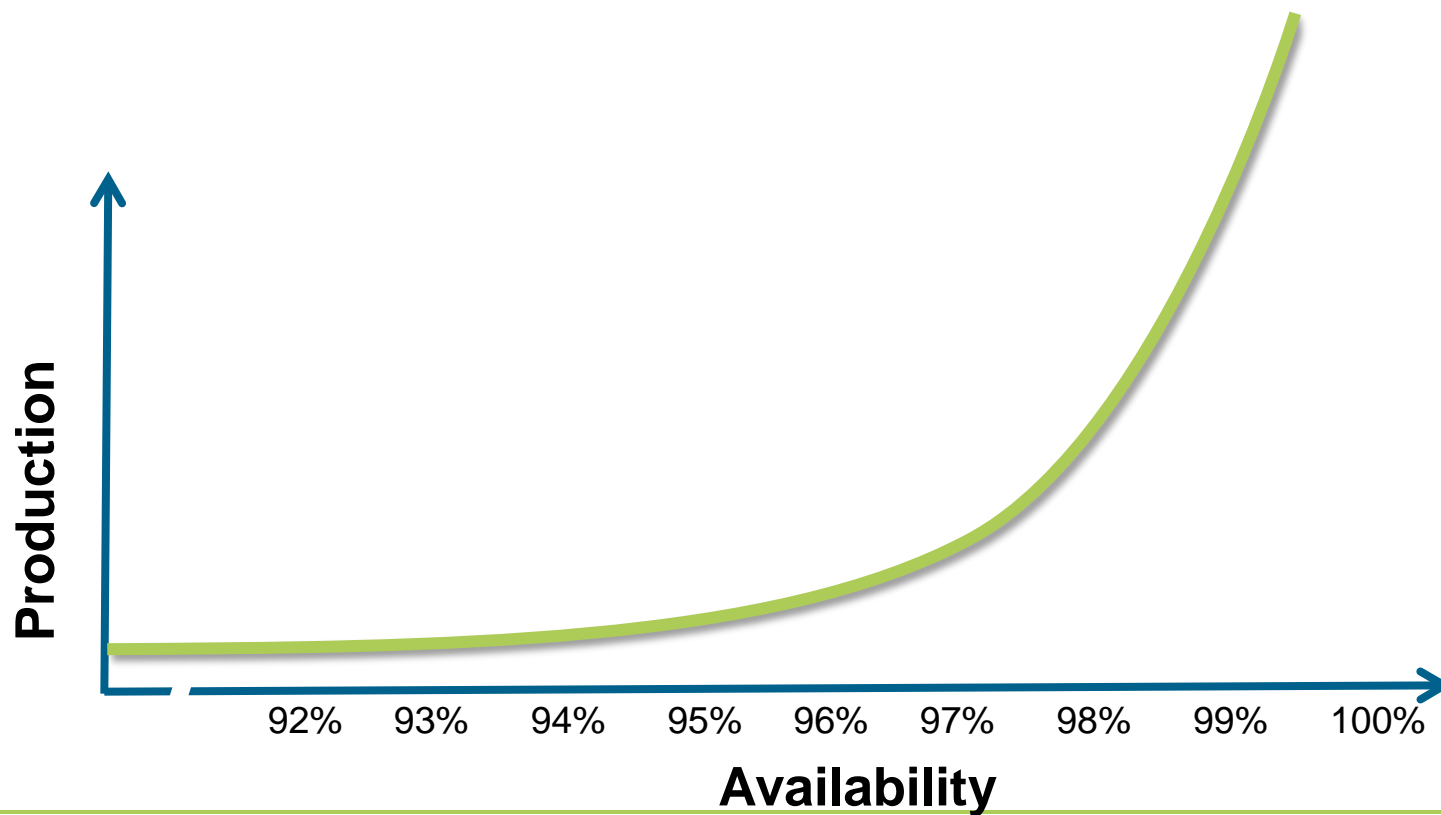
# What is the Cost of ~~Availability?~~ Production?



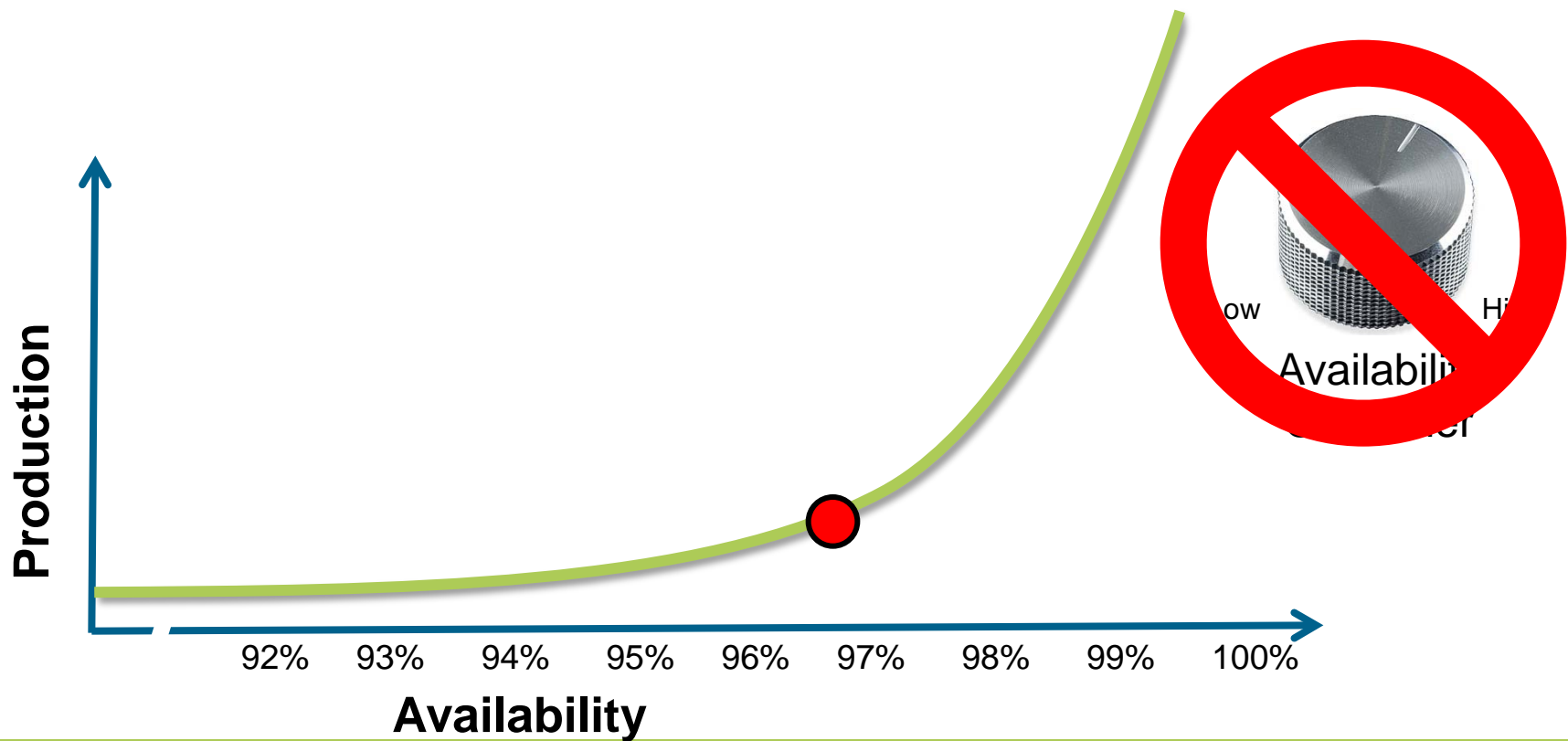
# Which Measures Really Matter?



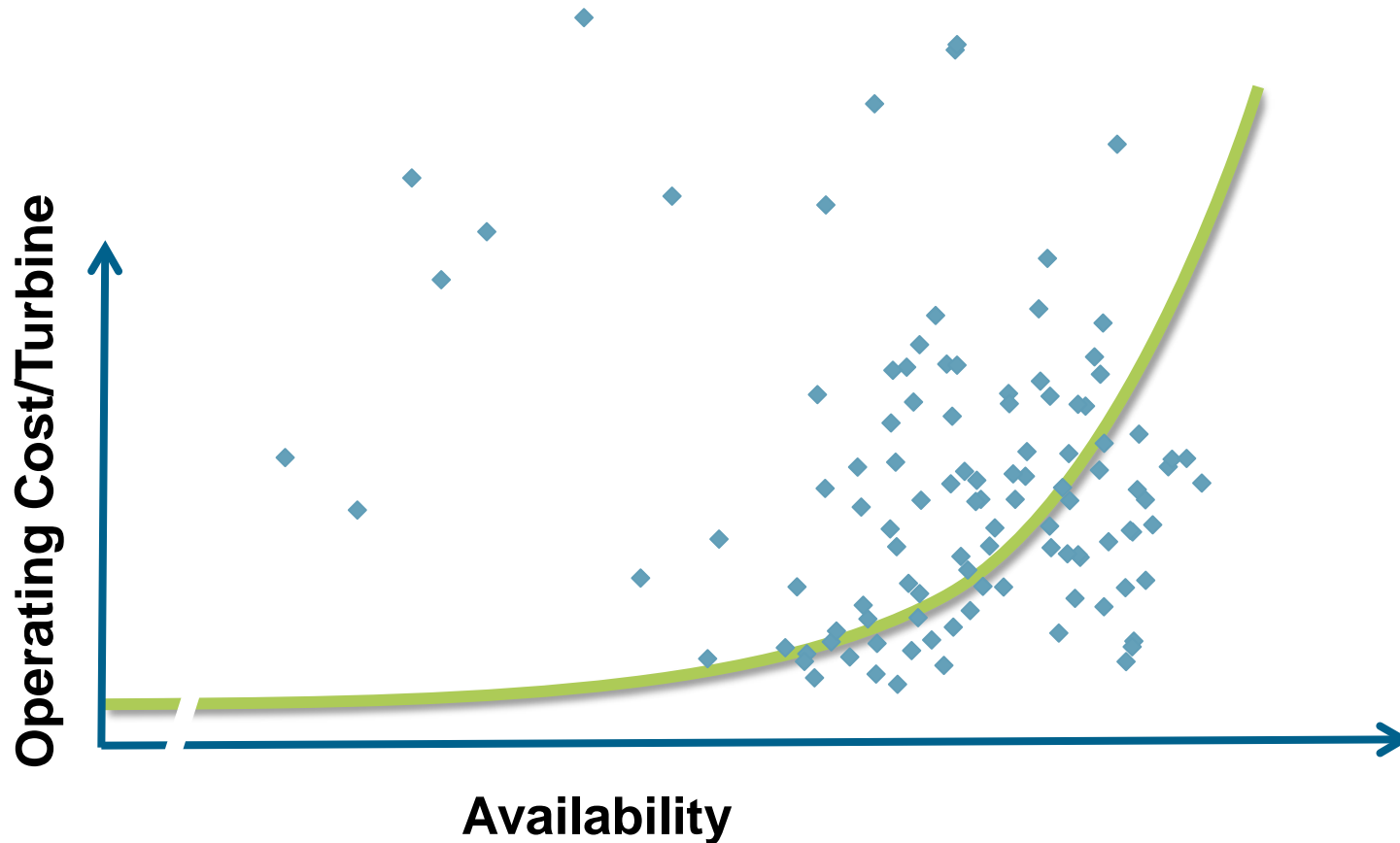
# Managing for Optimum Availability



## Just dial in the desired Availability (it's simple)



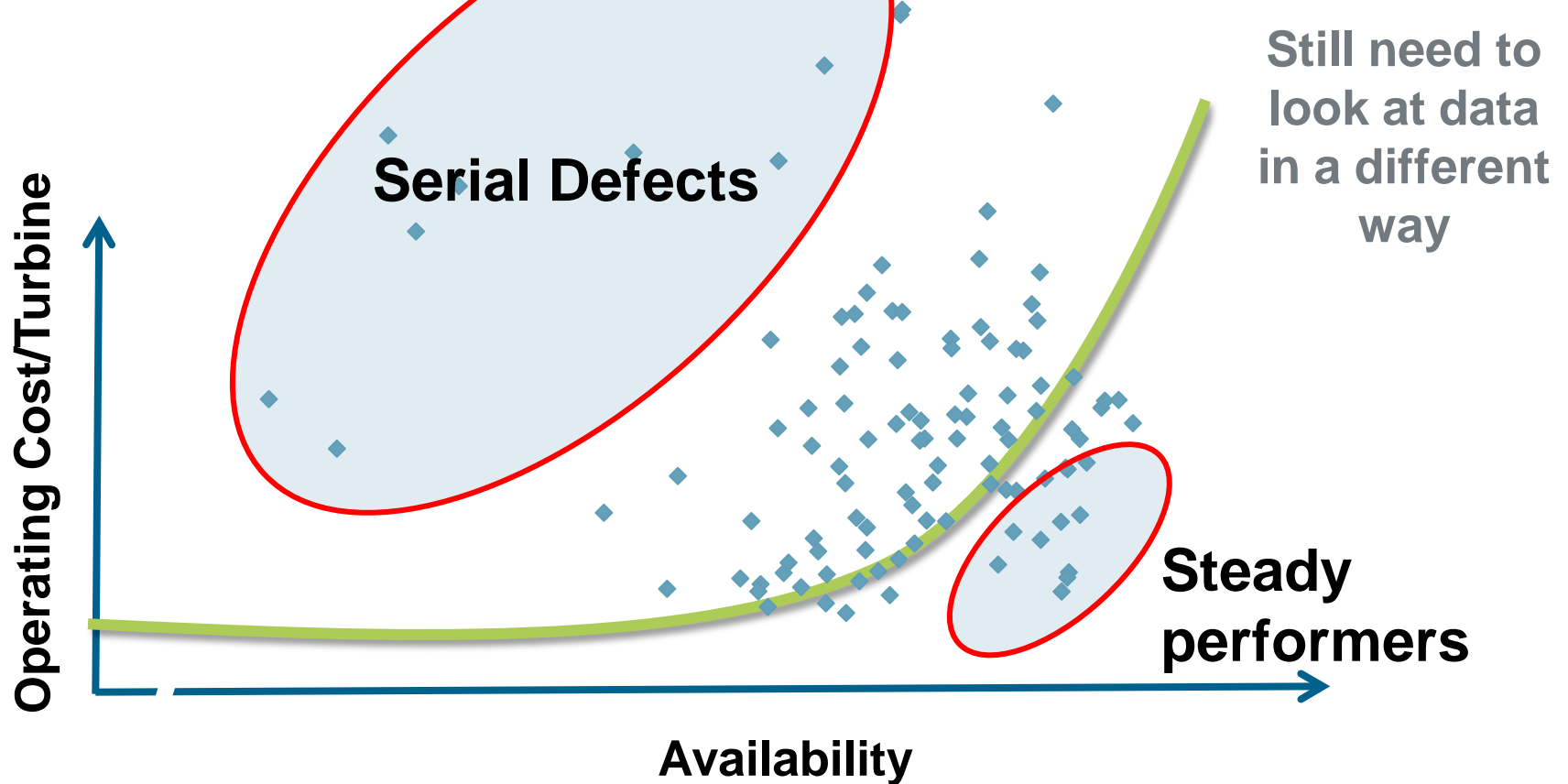
## Availability: Is it a good performance indicator?



Real World Data from NA (2006 to 2012)

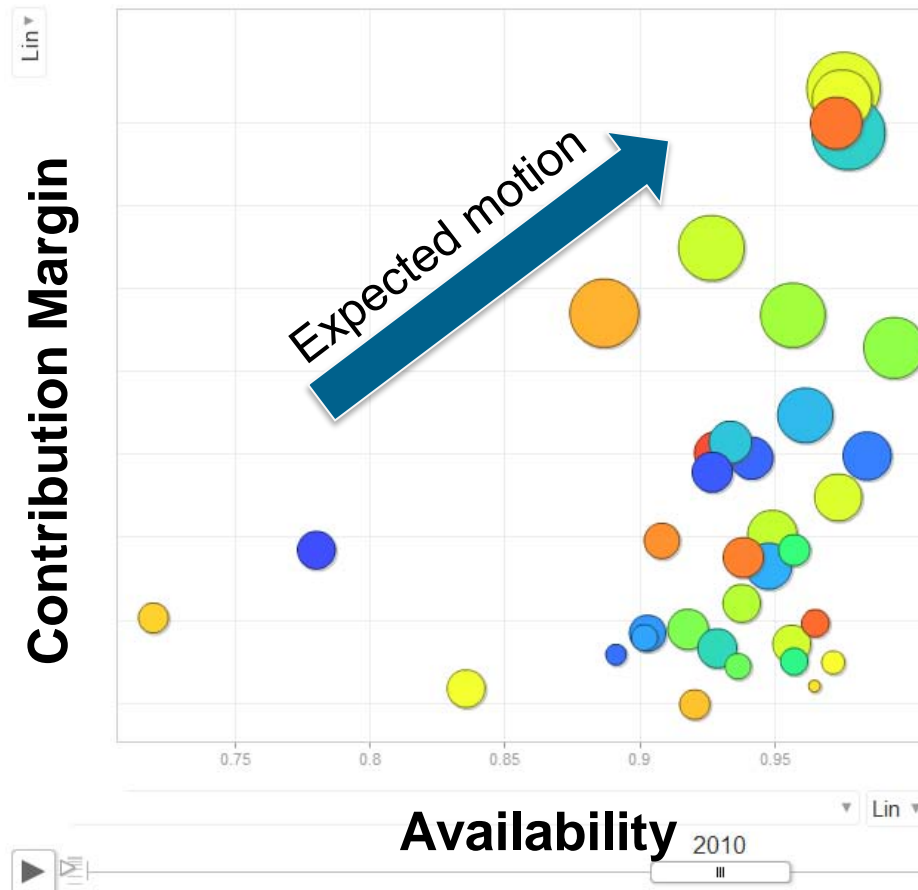
# Availability: Is it a good performance indicator?

After pulling apart data we identified a few items.



Real World Data from NA (2006 to 2012)

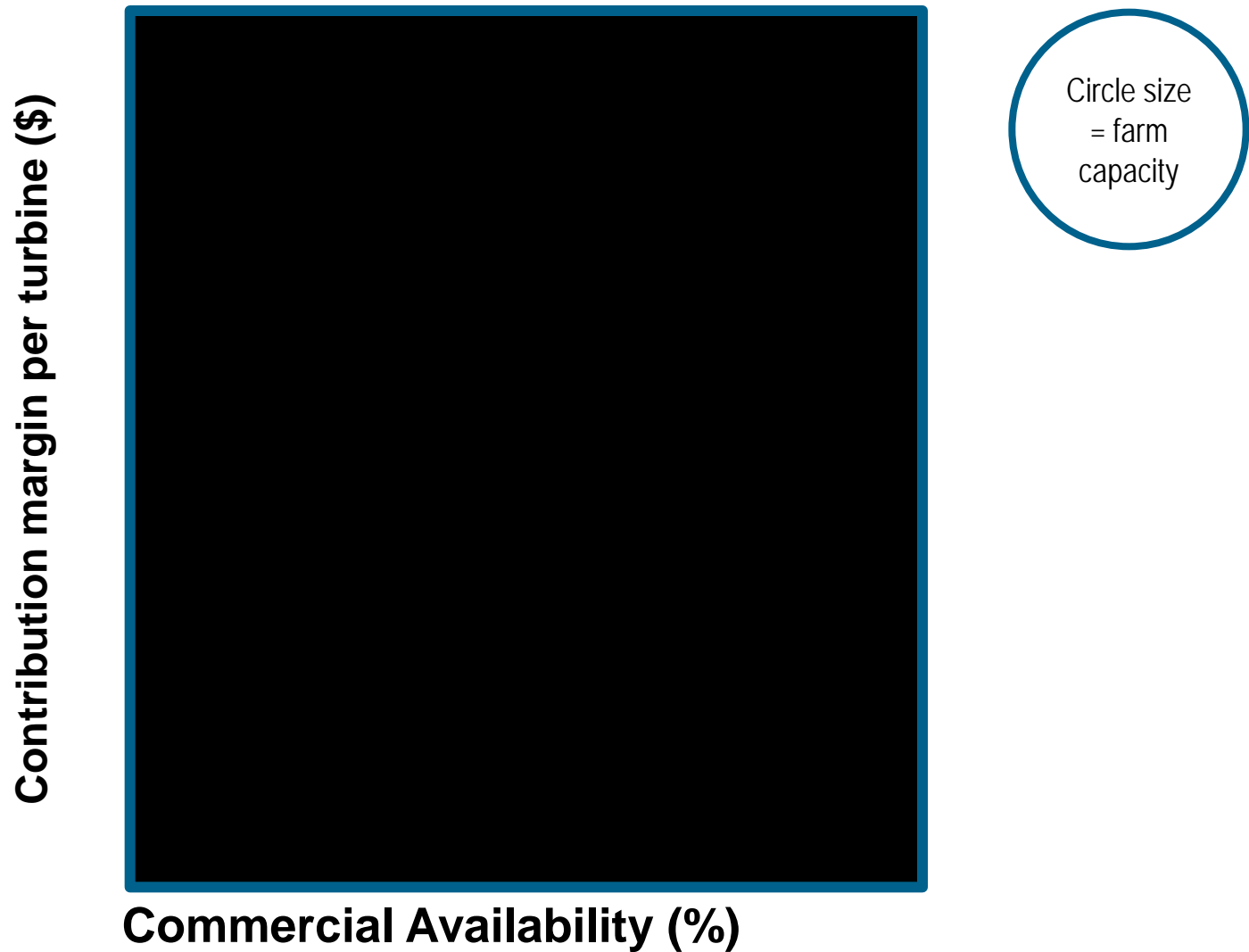
# Putting data into motion



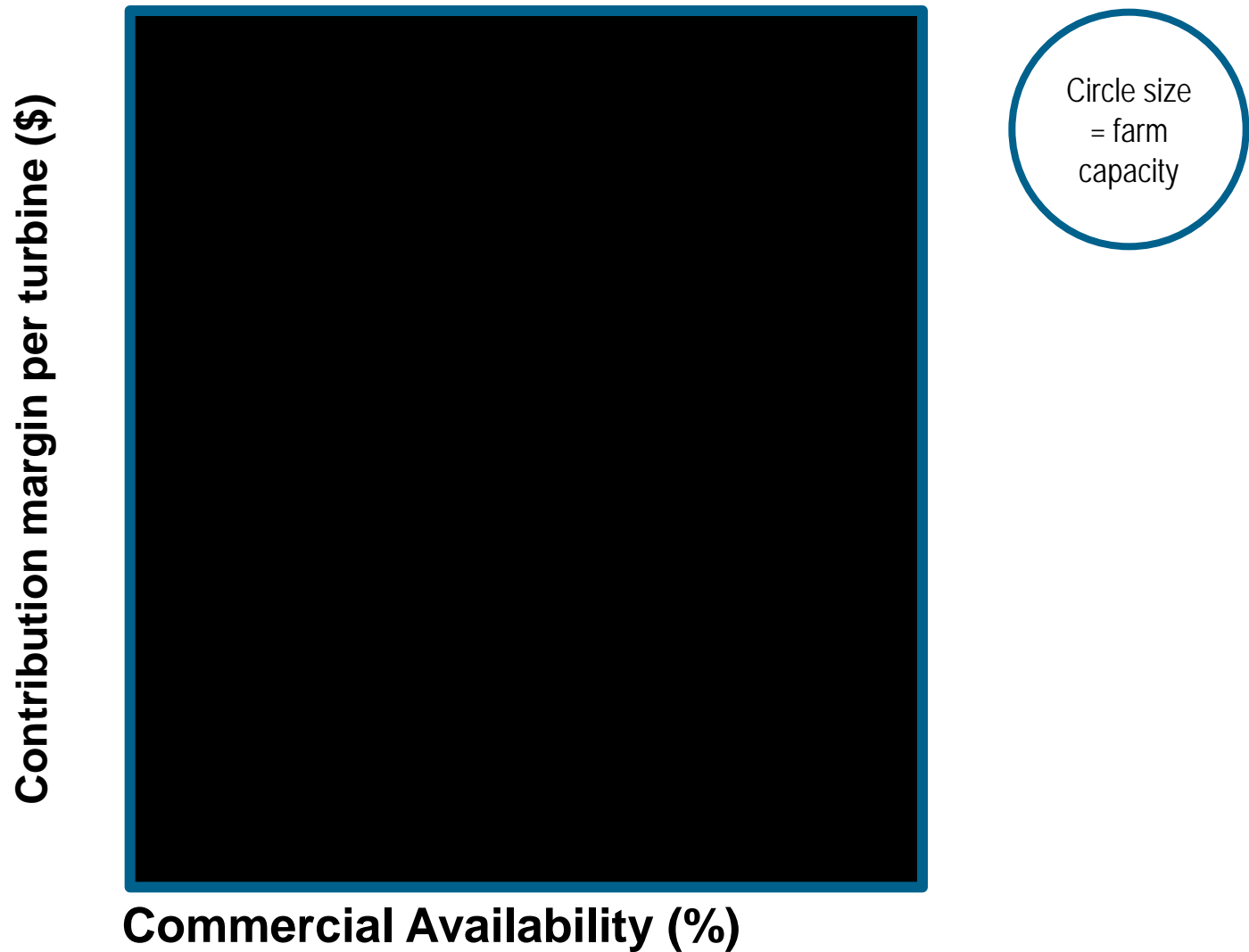
Circle size  
= farm  
capacity



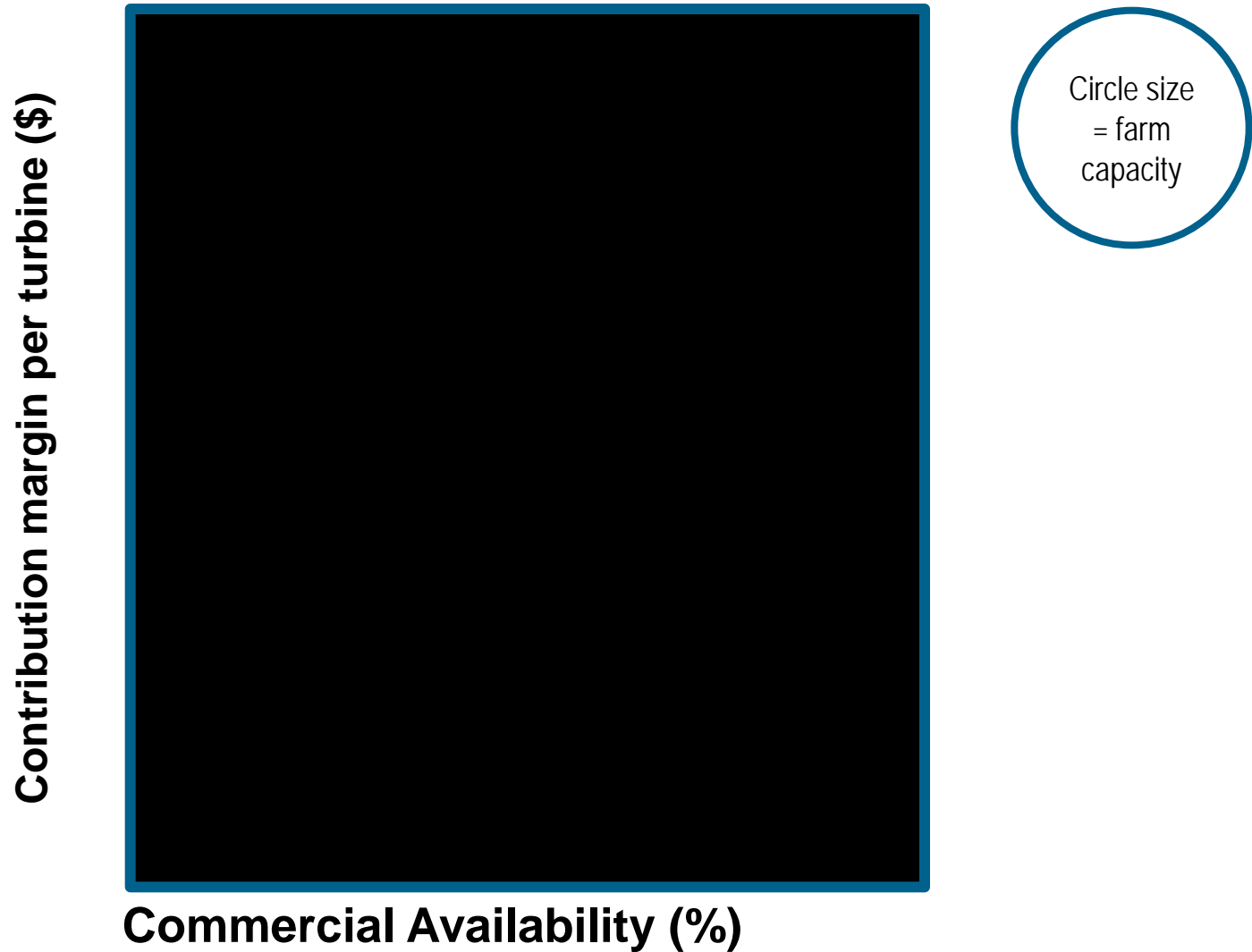
# Putting data into motion – the big picture



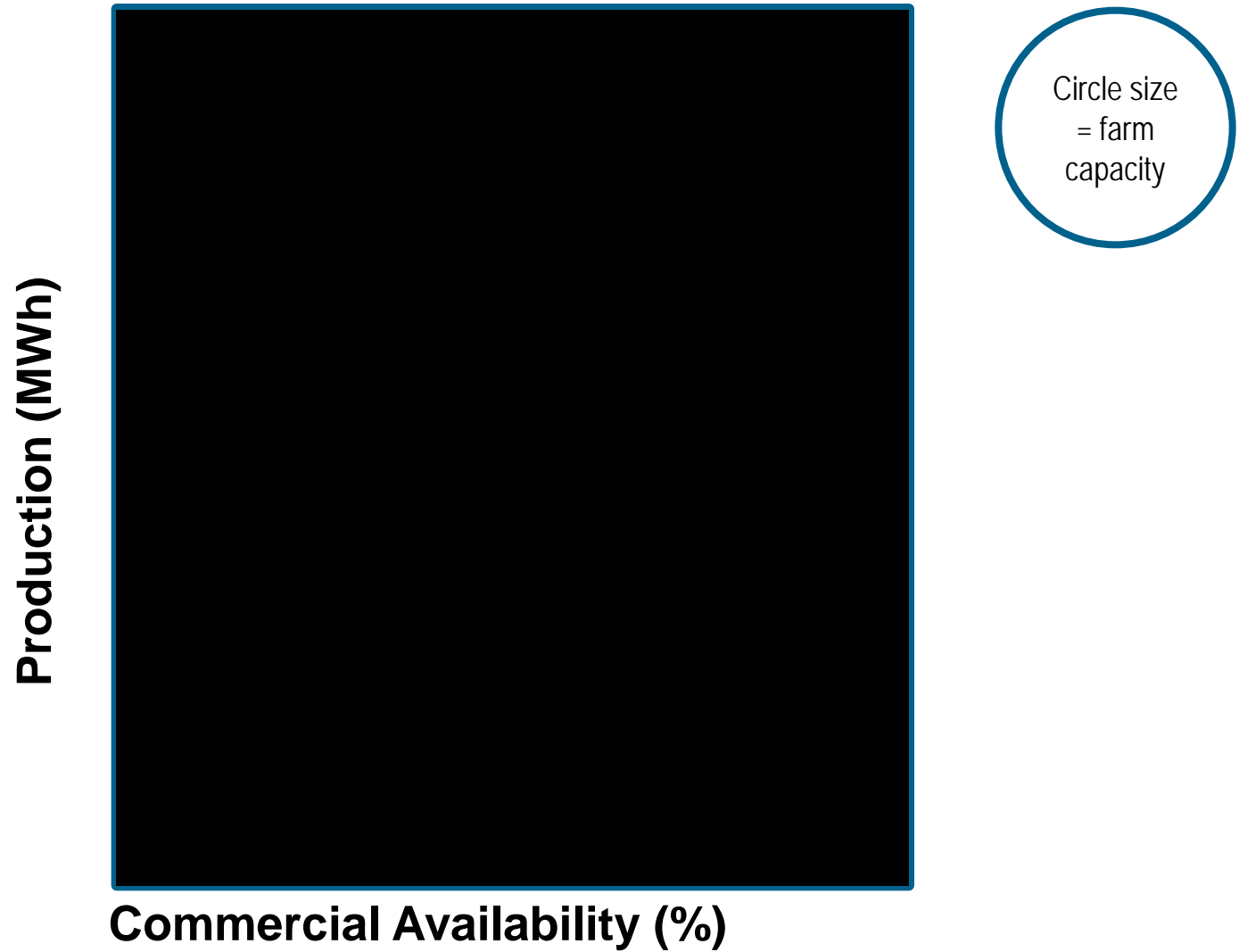
# Putting data into motion – highlighting specific farms



# Serial Defects / Major Component Failures



# What you can control on site



# Compared to Revenue

Contribution margin per turbine (\$)



Commercial Availability (%)

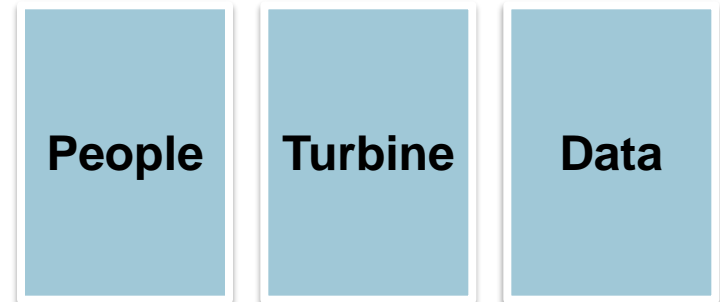
Circle size  
= farm  
capacity

# Managing for Performance – what is in your control?

What you're dealt

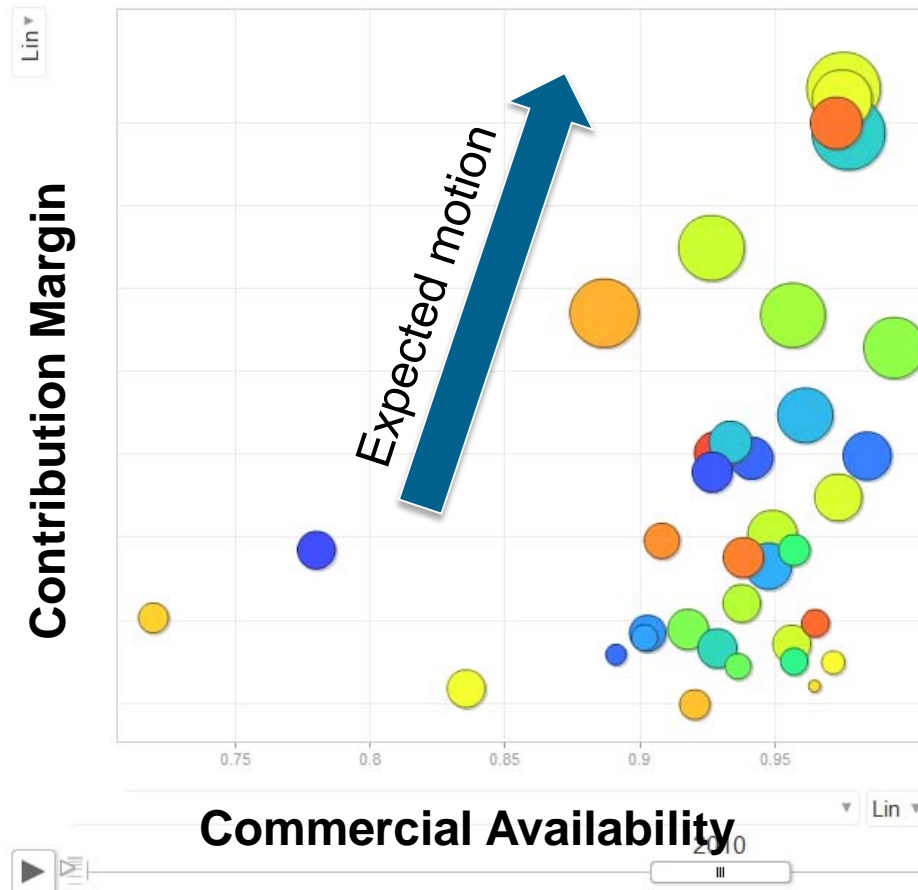


Things you can control



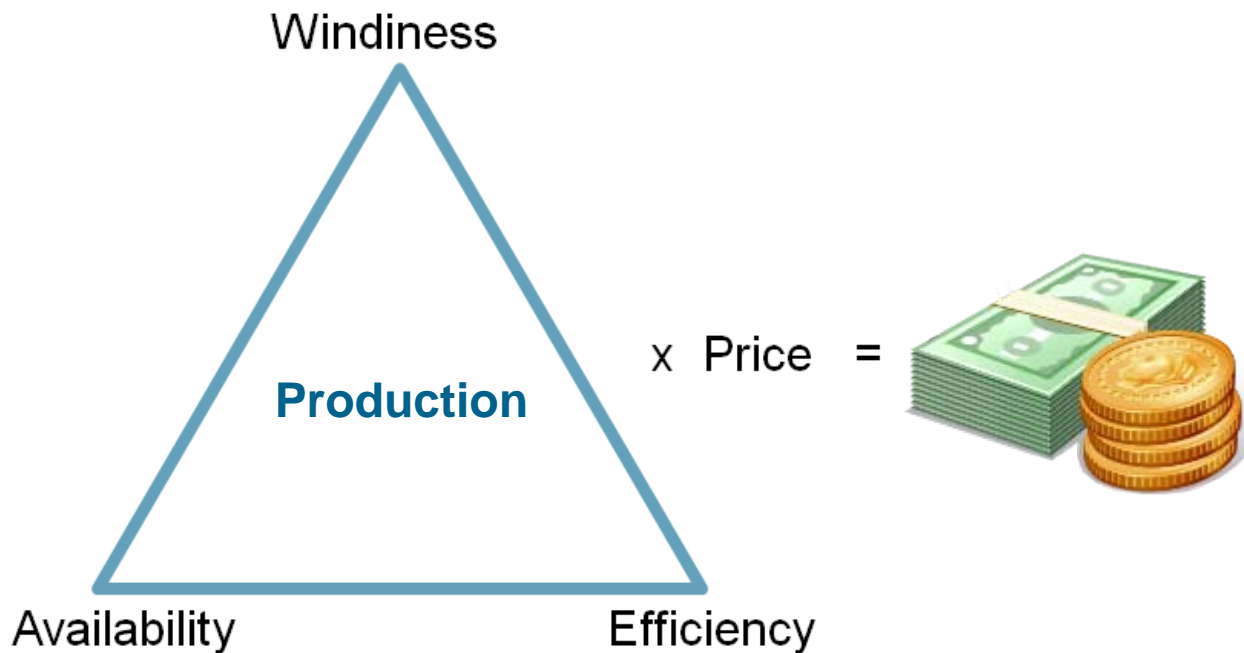
Training  
Process  
Maintenance...

# Enhancements and Reliability Trends



# Summary

- You can't manage solely for Availability and hope for the best
- Performance improvements - treat each farm on a case by case basis
- Understand the cards you've been dealt - focus on what you can control
- Small changes can make a big difference





# THANK YOU

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