

# Stage Gate

## Product and Development and Review Process

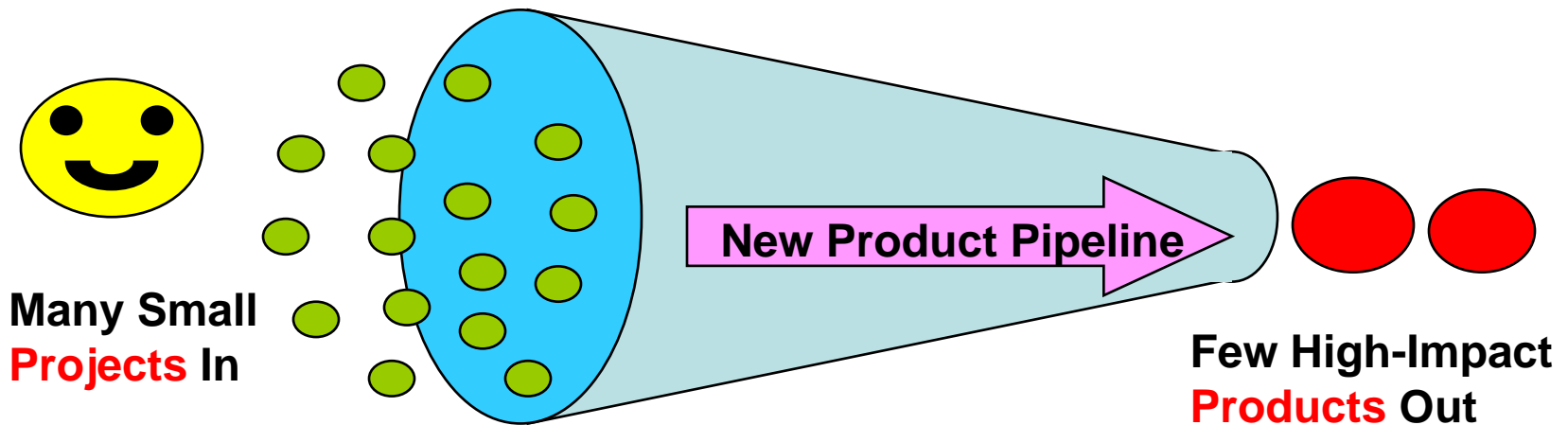
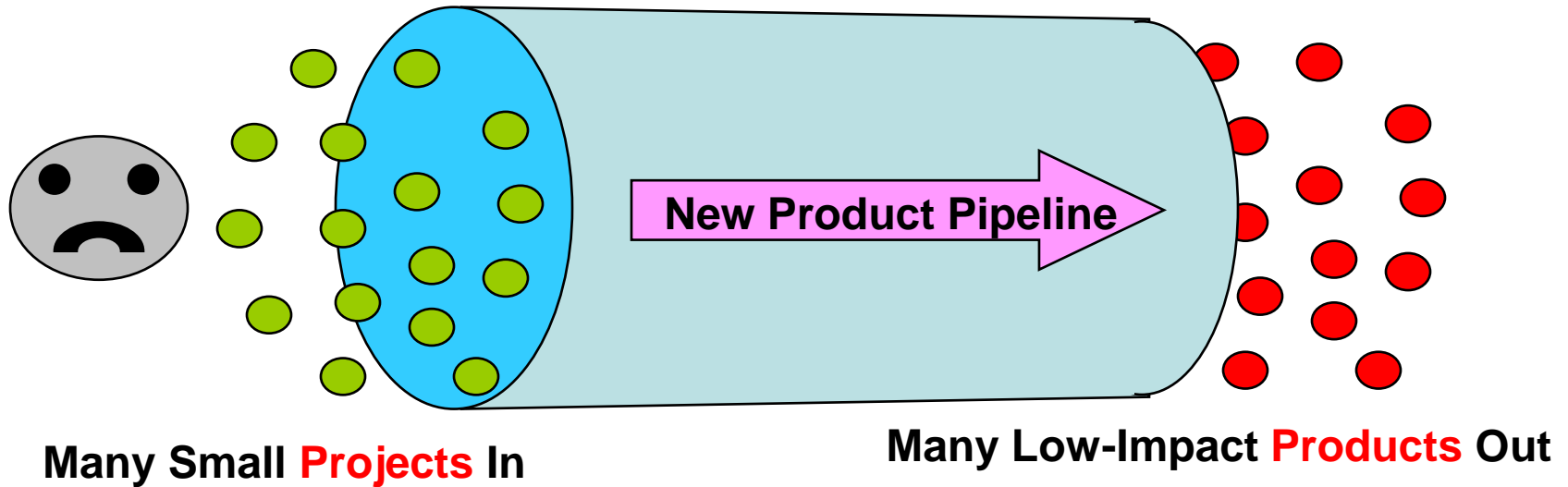
## Stage Gate Process:

### 1. What problem are we trying to solve with Stage Gate?

Match solution to problem.

### 2. How to design and operate a stage gate **review** process.

# What's the **MAIN** Problem We Are Trying To Solve?



# What's The Problem We Are Trying To Solve?

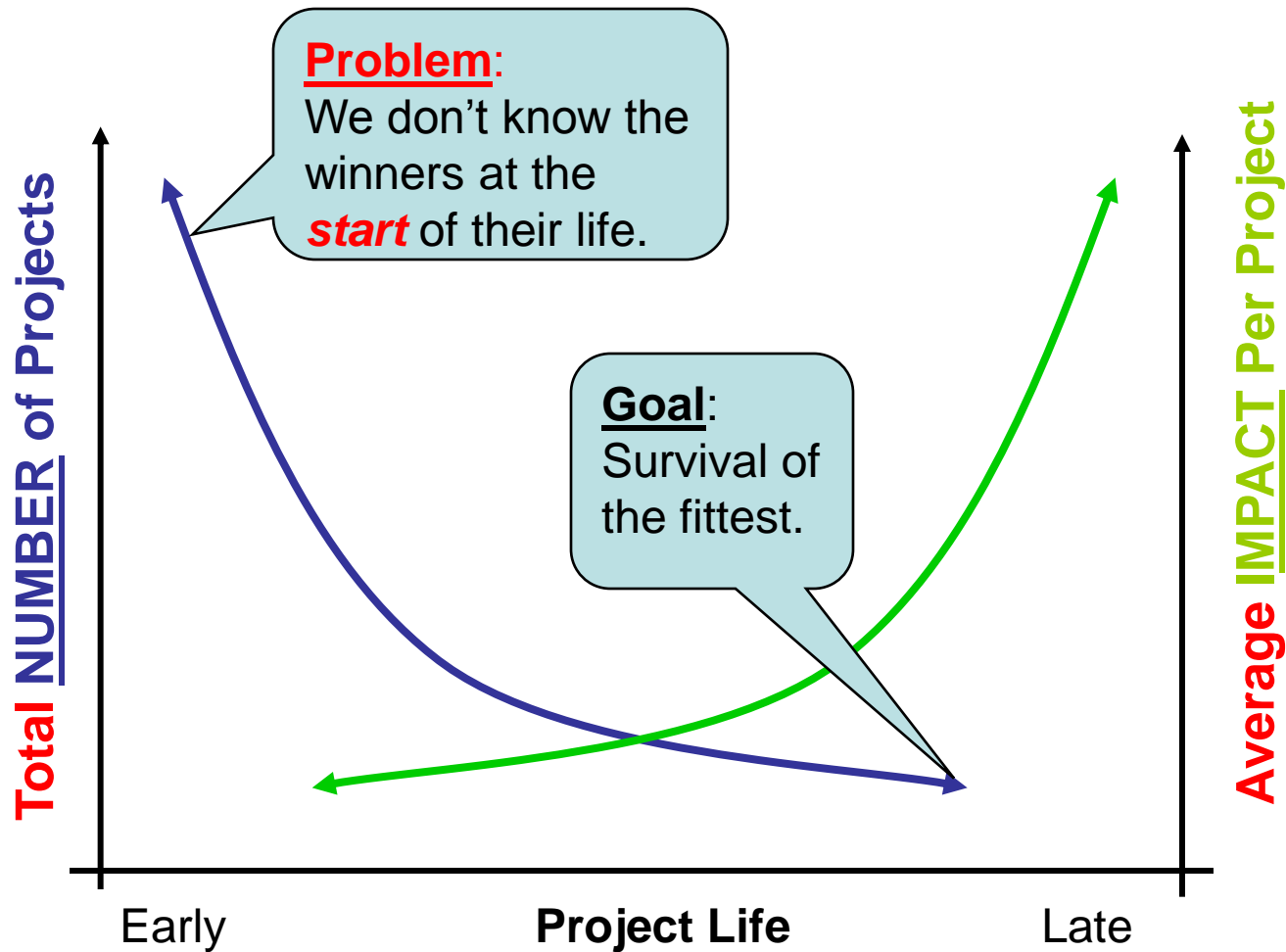
- Need new products that can **“move the needle”**.
  - Hard to get to \$1B by adding \$1M at a time.
  - Significant growth in many small increments is difficult to **manage**.
  - Many low-impact products are difficult to **support**.

***This is the main problem that the stage gate review process is targeted at.***

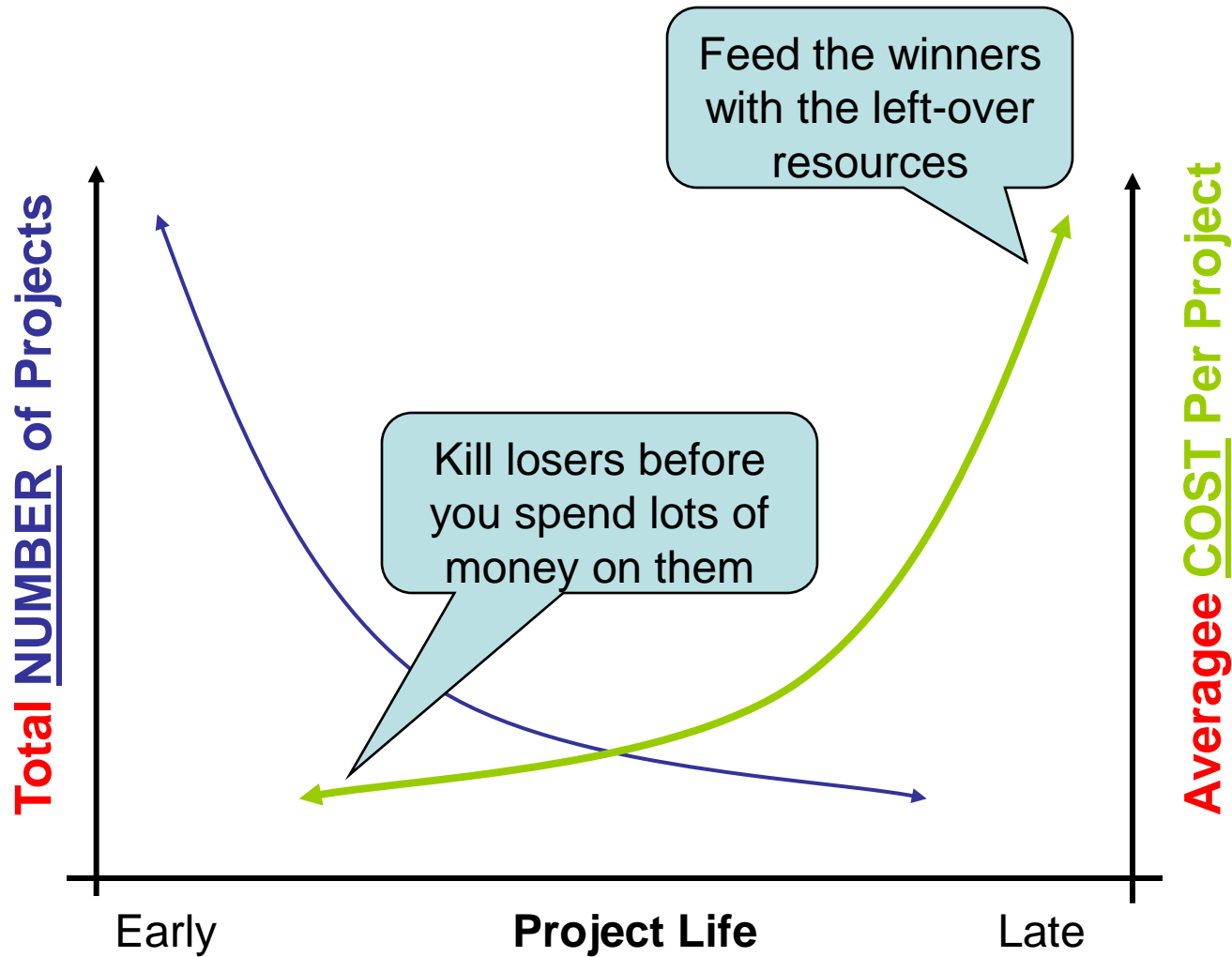
## **OK, but how does that apply to ME?!**

- It doesn't matter if you are one of 10,000 engineers trying to add \$1B in sales for GM
- Or Joe of Joe's Garage Shop trying to add \$1,000 in sales
- Trying to grow by \$1,000 in \$10 increments is hard to manage and hard to support when you are done.
- You simply need a process to pick the winners and kill the losers.
- That's what we are talking about here.

Overall Goal: Weed out projects that *turn out* to have low impact.



## Overall Goal: Maximize Bang-For-The-Buck.



# Possibly the biggest cause for failure of good projects:

- **Under funding** → Lack of adequate resources.
  - Inability to **ruthlessly focus** on **only** the best opportunities.
  - Inability to **IDENTIFY** best opportunities **EARLY** in life.

Project  
Management  
Process

Stage Gate  
Review  
Process

Basically, Stage Gate is about **killing** projects.  
Doing this wisely is a core competency of  
successful organizations.



## Hey! Wait a minute!

I didn't come here to have some guy tell me how to kill off my projects!

## Well...

You are much better off killing your own **bad** projects before they get out of control.

Than to have **someone else** kill your **good** projects because you ran out of money.

## Or...

You can spend your entire career whining about how no one ever supports your great ideas.

## It's your choice...

## **Stage Gate Technology Review Process:**

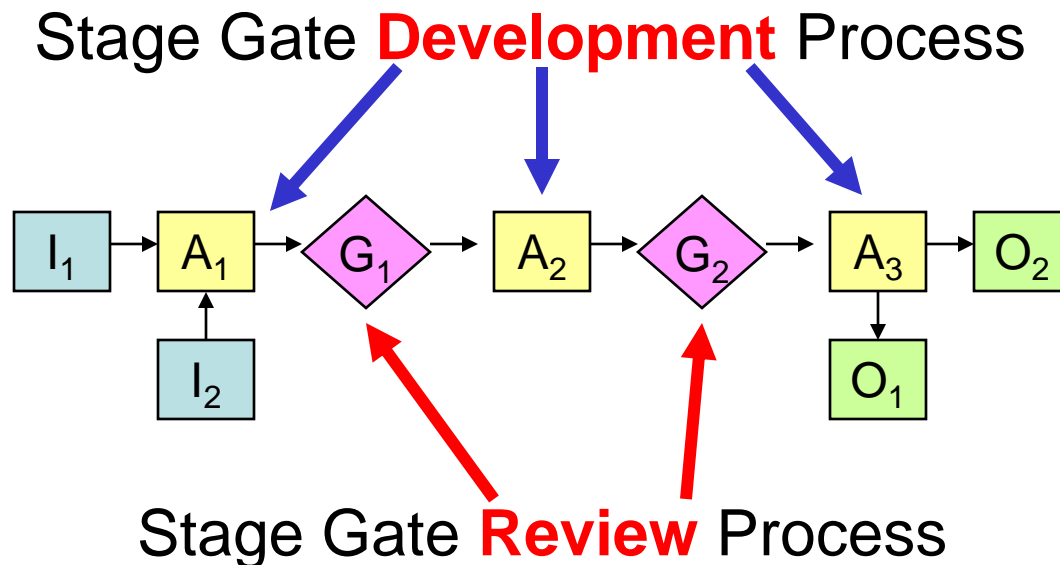
1. What problem are we trying to solve?

**2. How to design a stage gate review process.**

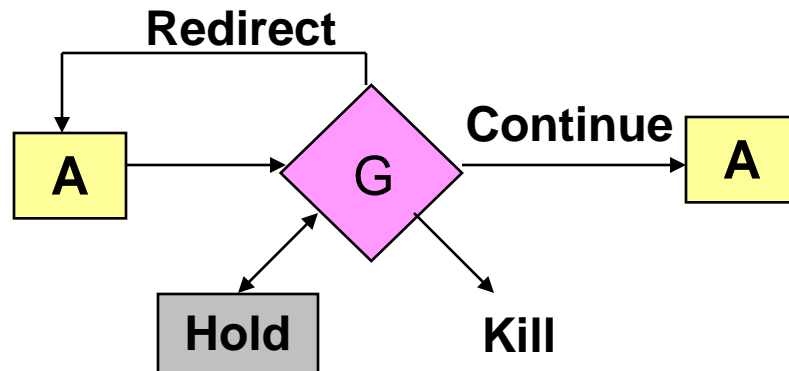
OK, I believe it's good for me,  
But how do I actually DO it?

# Stage Gate Concept is Quite Simple...

1. Break product development into stages,
2. Put “Stage Gate Review” decision blocks in the process flow...



## All Gates work the same way...

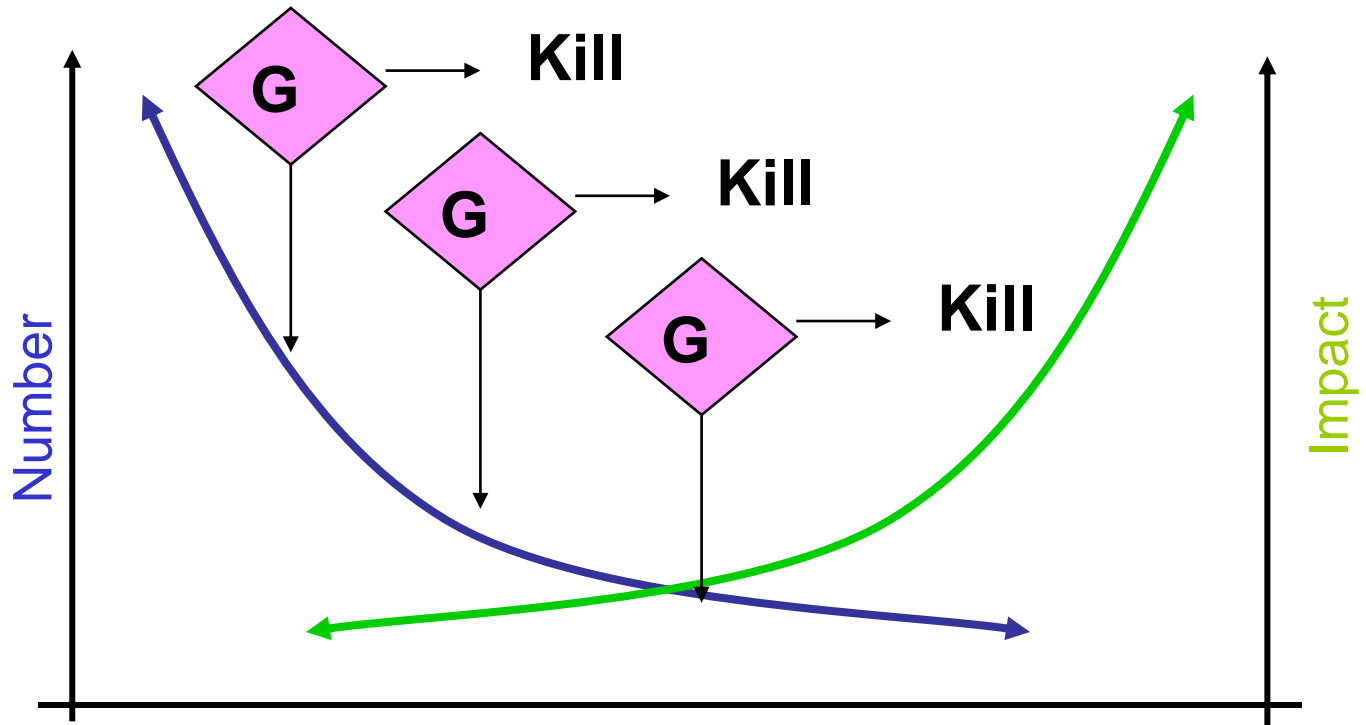


**Always/Only  
four decisions**

At the end of each development stage, you hold a stage gate review to determine if you should:

- Go to the next stage,
- Remain in the current stage,
- Put the project on hold,
- Kill the project.

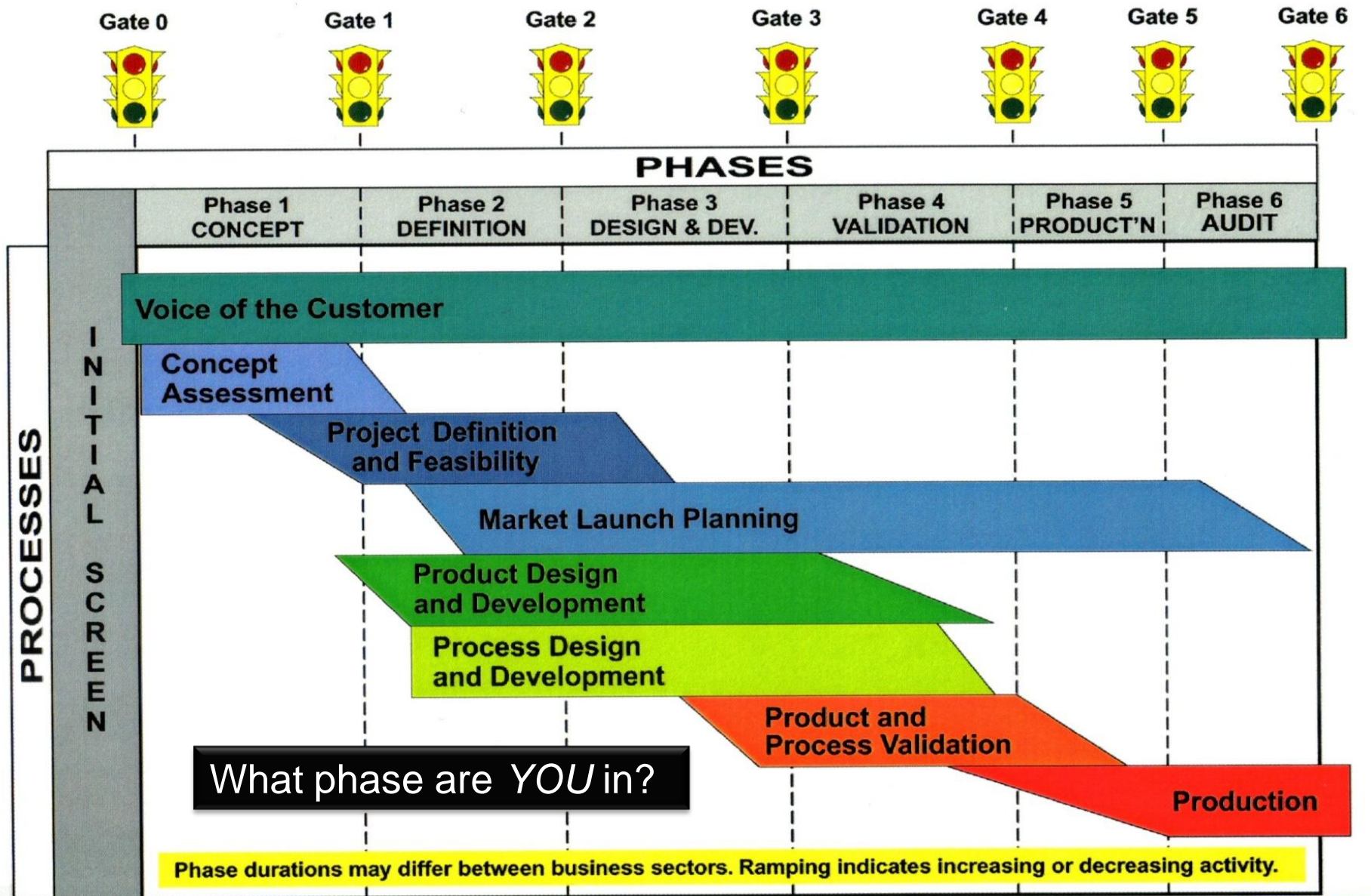
Purpose of **ALL** Gates is to create **BOTH** of these curves:



***That's it?! So what's the Big Deal?!***

## The Devil is in the Details:

1. Design/Structure
  - Example of structure.
2. Execution
  - How do you perform a gate review?
3. Culture
  - How do you actually make it work?!

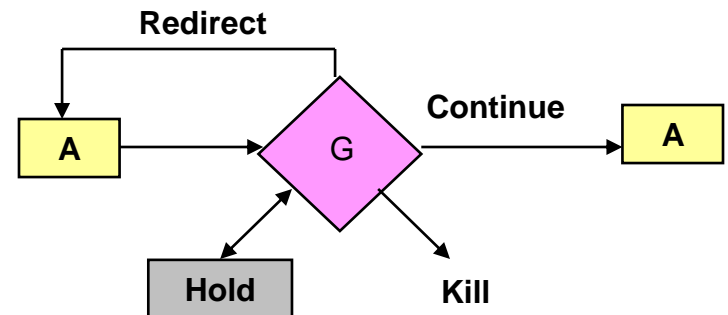


## 2. Stage Gate Review Execution:

Review is usually a meeting. So -

- What is the **actual** purpose of the meeting?
- How are **decisions** arrived at?
- Who should **attend** the meeting?
- How is the meeting **conducted**?

This is what your “*final*” project presentation could look like next year.





## Purpose of Stage Gate Review Meeting:

Stage gate reviews...

- Are **business decision** meetings
- Are **not** project reviews
- Are **not** design reviews
  - Are **not** performance reviews

About picking the projects that will have the biggest impact on your business

A key advantage of a well-deigned and well-executed stage gate process is that it makes the engineer/technologists an **integral contributor** to business decisions.

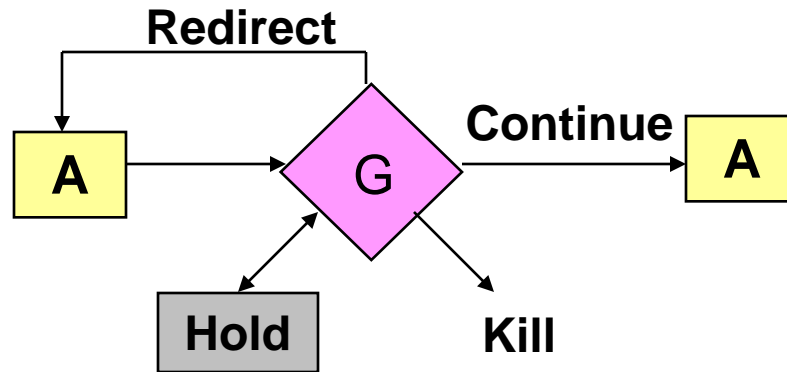
This is absolutely essential in technology-driven businesses.

## Purpose of Gate Review Meeting:

- Picking “winner” projects and killing “losers”.
- For “winners”, this is about:
  - Making an *investment* decision (where to put money),
  - Allocating and *committing resources* (where to put people),
  - Assessing *potential of project* (all info needed to make good decision), not quality of project or product,
  - Assessing *risk* of project (but “winner” may be high **or** low).

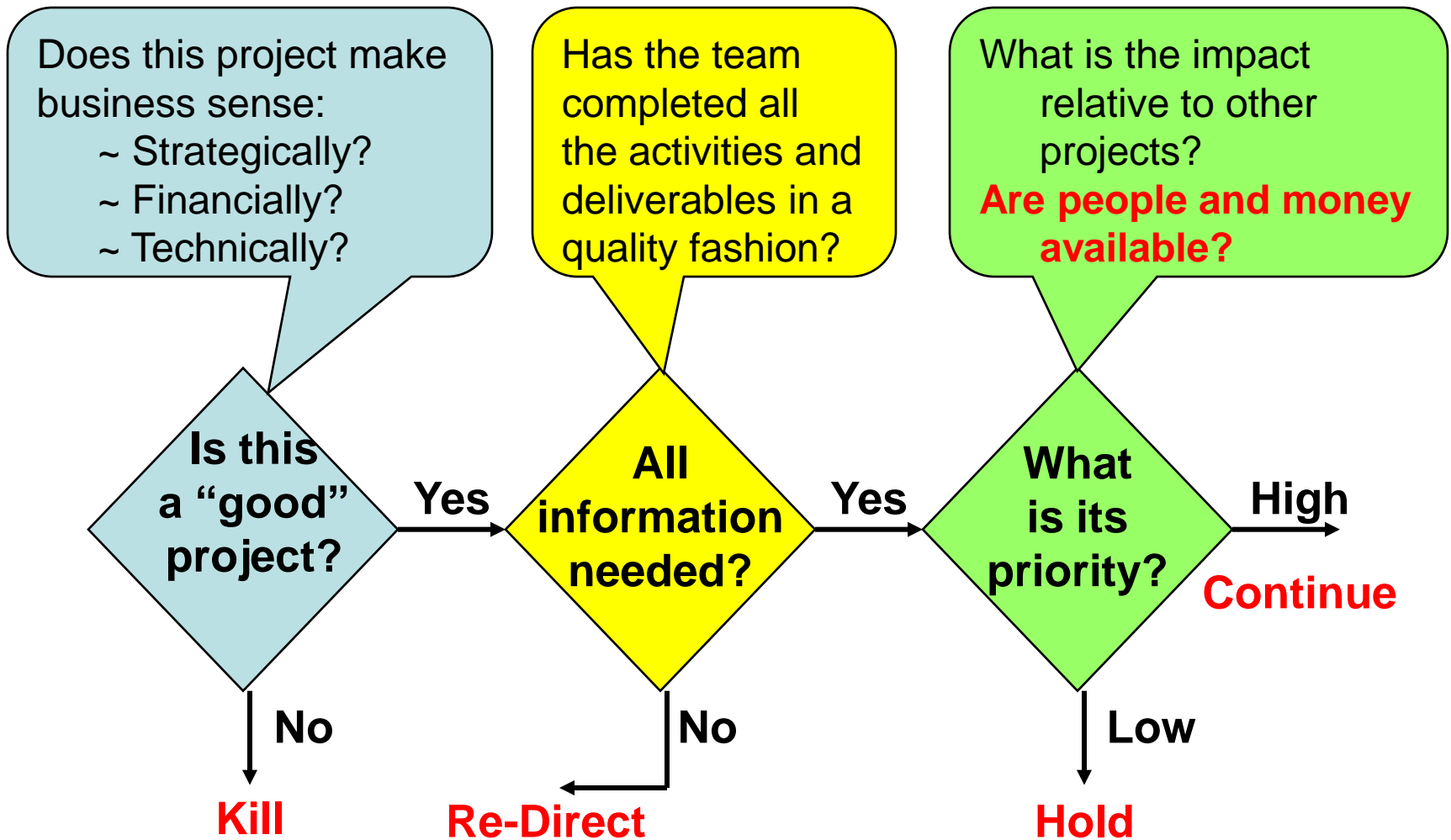
# OK, but how do we decide what the decision will be?

- Continue?
- Redirect?
- Hold?
- Kill?



Well, let's look inside of a gate...

# Gate Decision Elements:



The general idea here is to make the decision as

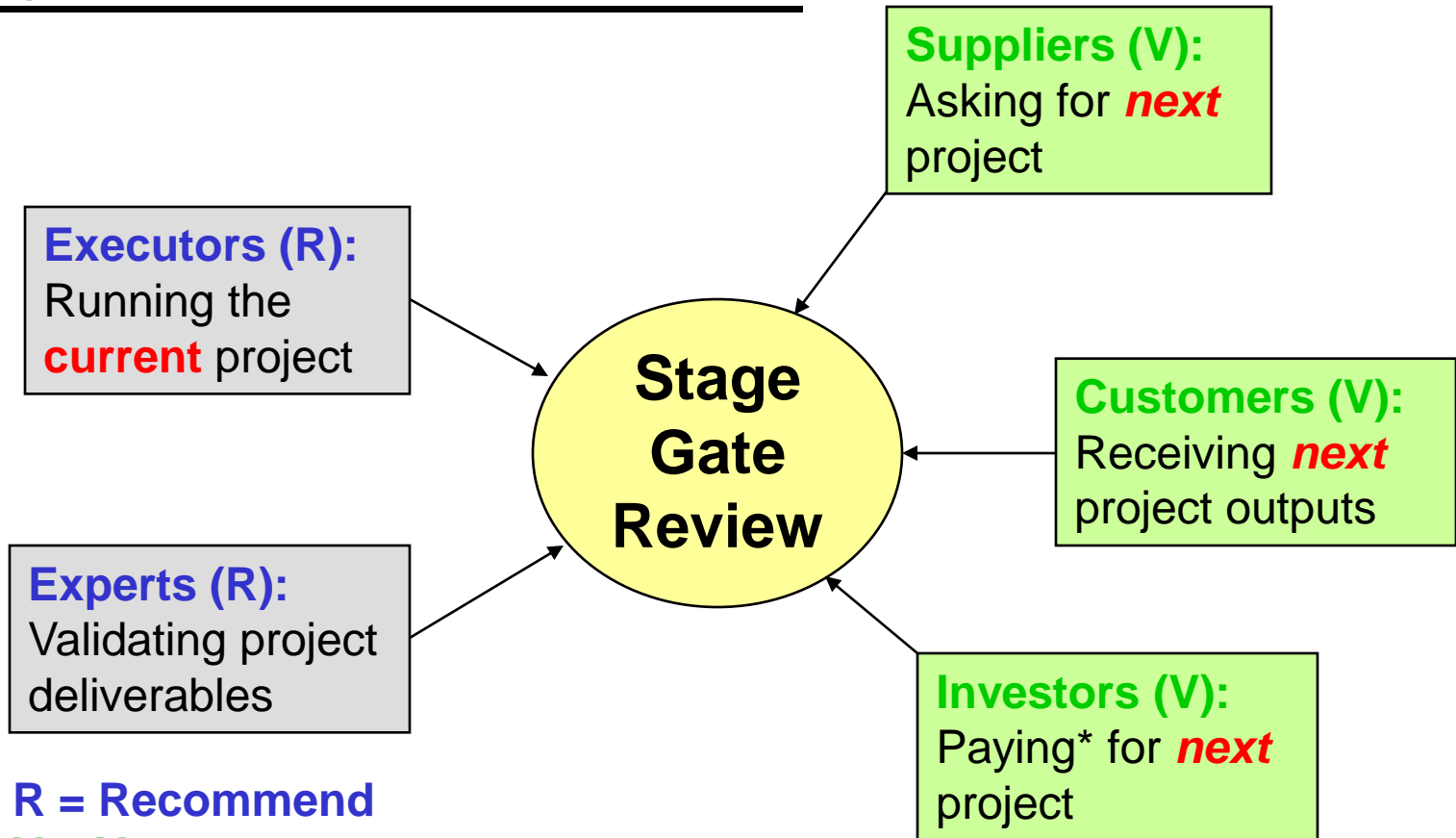
- Systematic
- Automatic
- Robot-like

As possible.

You want an objective process that drives opinion and conjecture out of the process.



# Who Should Attend the Review?



**R = Recommend**

**V = Vote**

\* = "Paying" means providing money and/or people

**Note: a particular individual may play more than one role.**

## Typical Stage Gate Review Agenda:

- 20 min.      Executor presentation and recommendation –  
All participants – Silent listening to presentation  
No discussion, but clarifying questions allowed.
- 15 min.      General discussion –  
All participants – Led by non-voting facilitator.
- 15 min.      Voter deliberation –  
Typically voters only – Led by facilitator.
- 10 min.      Tem briefing on decision and action items –  
All participants – Led by facilitator.
- **1 hour      Yes, this can, and must, be met.**

## Gatekeeper Rules of Order

- **“Gatekeepers” are the voters** at the stage gate review meeting.
- If gate review meetings degenerate to vicious attacks by gatekeepers on project teams –  
  
Then before long you won't have any new projects.
- To avoid having this happen, gatekeeper **rules of order** need to be established and enforced (by review meeting facilitator).

***Here are some rules...***



# Gatekeeper Rules of Order – Part 1

- Gatekeepers must attend in-person or virtually, or your vote **defaults** to “Continue”. A proxy may be designated.
- Gatekeepers must review team presentation **before** the meeting.
- Serious concerns must be communicated to teams **before** the meeting. No “surprise attacks” allowed.
- No “cross-examination” allowed **during** team presentations.
- Gatekeepers cannot require and/or base decisions on information **outside** of the scope of the stage being reviewed.

# Gatekeeper Rules of Order

- Decisions must be made in accordance with the **criteria** for the gate, not on gatekeepers opinion.
- Final vote must be **unanimous**. Gatekeepers must be willing to negotiate with other gatekeepers.
- You can “Hold” a project, but you can’t “Hold” a **decision**.
- “Continue” decision means that money and resources are **committed!**

## Stage Gate Technology Review Process:

1. What problem are we trying to solve?
2. How to design a stage gate review process.
- 3. Review process culture issues.**  
*OK how does this REALLY work?*

## Impact:

Stage	Number	Cost Per	Killed	Killed Cost
A	60	50	45	\$2,250
B	15	200	11	\$2,200

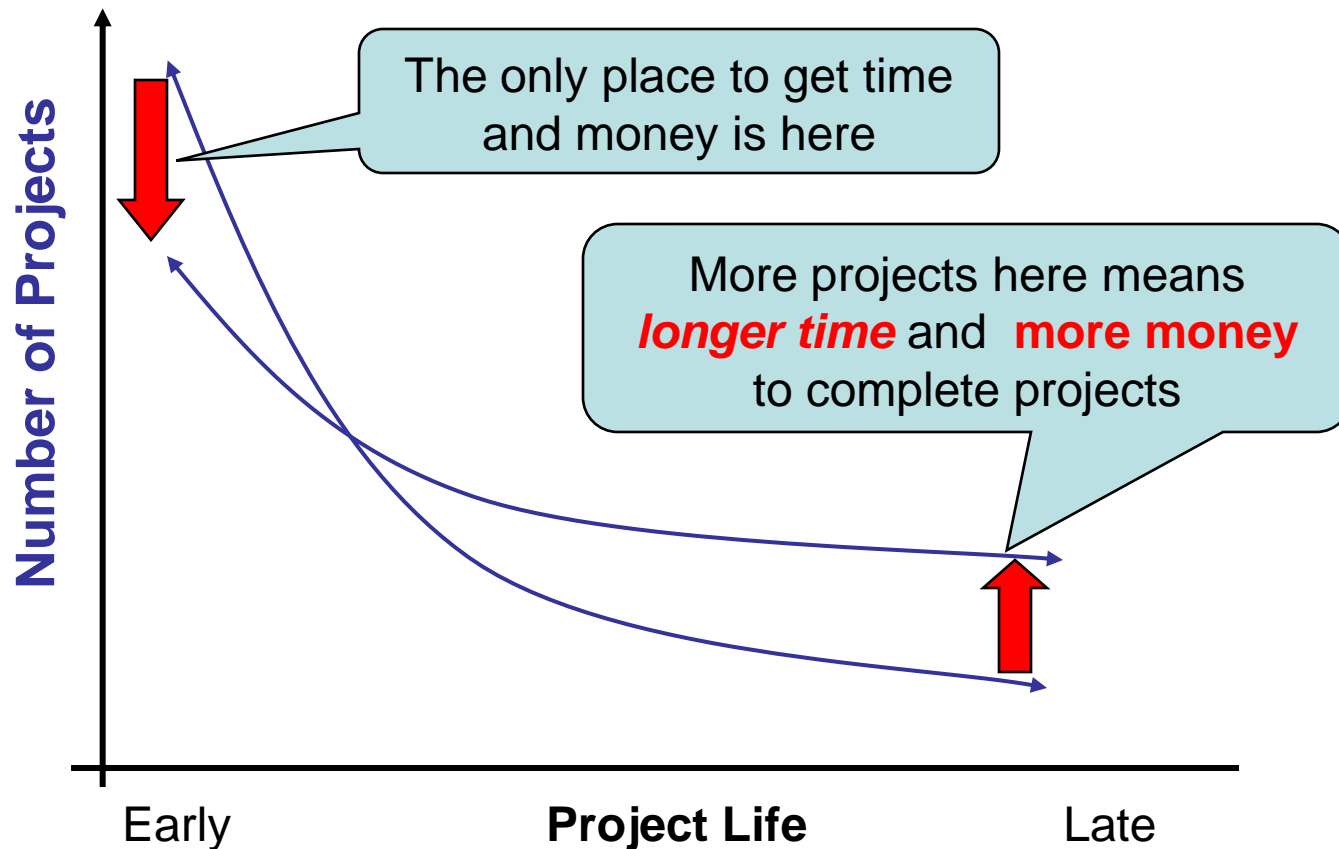
Out of a total of **\$10,000**

- You spent **half** your budget on projects that you **killed**.
- Actually, this would happen **anyway** (or worse).
- But here you **plan** for this right up front.

***That takes significant managerial courage.***


## Reality:

- You never **kill** as many as you intend.
- So, you never have enough money or people to **start** as many as you intend.



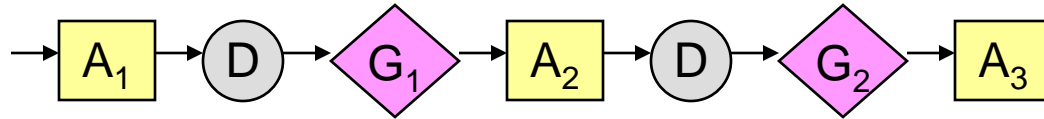
## Reality:

- Excessive number of projects put on **hold** due to lack of resources.
- This clogs up system with things that you'll probably **never** get around to anyway.

Disposition	Target	Reality
Continue	25%	20%
Kill	65%	45%
Redirect	5%	10%
Hold	5% 	<b>25%</b>

***It takes significant management courage to face the reality of the situation***

## Reality: Stage gate reviews *will* slow projects down



# Reality 4

- Reviews are *sequential events* scheduled at certain times and attended by *particular* individuals, usually very busy individuals.
- Reviews usually grouped in bunches to accommodate reviewers.
- So there may be significant *delays* waiting for the project's next gate review.
- This *does* slow things down.
- But killing unfit projects earlier in the project ultimately *frees up* resources that would have been *wasted* on weak projects.
- *So, projects slow down, but overall throughput increases.*

## Big mental shift:

- Tendency on part of project champions is to **overwhelm** decision-makers with information to justify continuing with process.
- But here, you provide **exactly** the information that you need **exactly** when you need it.
- Whole idea is to spend as **little** money as possible to make a **good** (not perfect) decision.
- **Goal: never spend one penny more than what you need to get through the gate.**
- This goes against human nature – especially for engineers, who tend to be (and are taught to be) highly risk-averse.
- “Survive and Advance” mentality - You only need to win by 1 point to advance to the next bracket NCAA championship.



## That being said...

- The vast majority of projects **will** be killed.
- People will see this as:
  - Personal failure,
  - Disruptive and unsatisfying - Constantly starting new projects – never “finishing” anything.
  - Threat at performance review time –
    - What am I being judged on?
    - What is “success”?
    - What is “excellence”?
  - Threat to job security – Constantly killing projects implies an insecure position.

***This is the ultimate cultural challenge of Stage Gate***