

# Managing Agile Development

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# What does it all mean?

- Ten volunteers
- Write down the first ten words that come to mind when you hear the words:

“Software Development Project”



# What does it mean?

- How many people got ten out of ten?
- How come we all work together in software development but it means different things to everybody?



# The Burning Questions

what is a manager for...  
and  
what does a manager do...



# Management in Antiquity

- **The Sumerians 3000BC**
  - Written business, legal and historical records on clay tablets
  - Early form of Managerial control
- **Emperor Diocletian 284AD**
  - Too many people reporting to the Roman emperor
  - Developed hierarchical system of governance
- **The Roman Catholic Church 15/16<sup>th</sup> Centuries**
  - Written job descriptions for its Priests, Bishops, and other religious workers.
  - Advisors to the priests – **the first administrators**



# Management in Antiquity

- **The Industrial Revolution : 1700+**
  - Agrarian society to enclosure and the factory system
  - All workers under one roof
  - Strict control of workers by Factory owners.
  - Factory owners interested in gaining maximum return from their investment and from this an **interest in management techniques.**

## Leading to:

Scientific management

Frederick Winslow Taylor 1856



# Scientific Management - Taylor

- Planning → Improving → Motivating
- Time and motion studies
  - one most efficient way to do a task → Standards
- Standardisation
  - Factory owners supplied the standard tools – e.g the 21 pound scoop
- Piece rate system
  - Time and motion study to determine the standard for a fair days work – workers paid according to this standard
- **Established the Manager's central role as Planner, Improver and a Motivator of the individual**
- **Taylorism**



# What is a Manager For?

to manage...

...is to **achieve**

i.e. we all **managed** to get here today...

...an achievement!

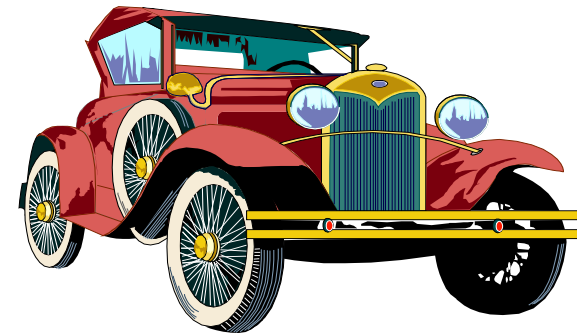
the manager is **responsible** for achievement

but...



# From Taylorism - Fordism

- In the 20<sup>th</sup> Century, Gilbreth's Time and Motion studies reduced costs through the further Division of labour and increased automation between processes
- Mass Production Techniques were promoted by Henry Ford and advanced through the requirements of the two World Wars
- 1950's and 1960's saw High Mass consumption and production
- **Modern Management of individual output by measurement, command and control**



# What Went Wrong?

- The manufacturing industries went through the quality management revolution in the 1960s and 1970s.
- Since then there have been other schools of management thought too.
- But why does IT, and software development in particular, seem to rely on outdated “command and control” type management techniques?



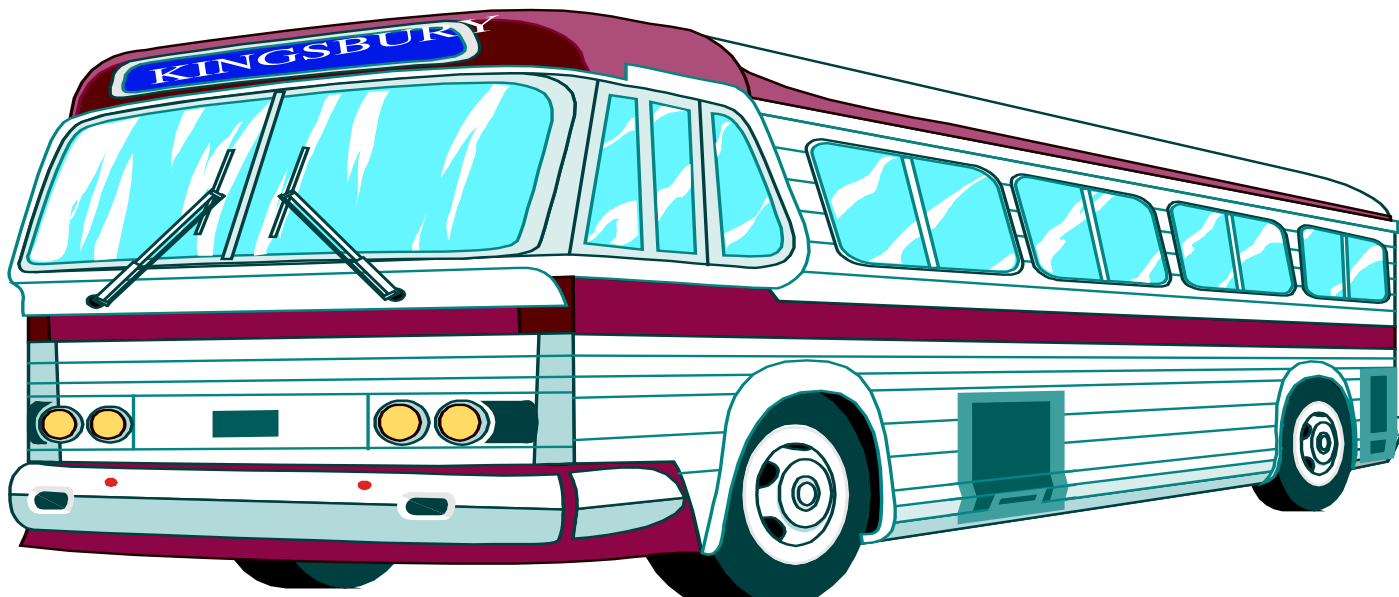
# Agile Management

- Recruitment
- Performance
- Improvement
- Retention



# Recruitment

get the right people  
on the bus...



# Maturity

- **Task Maturity:**
  - Level of technical skills.
  - Don't be fooled by qualifications .
  - Can be examined by technical tests.
  - Try pairing the candidate with your staff.
- **Emotional Maturity Skills:**
  - Empathy
  - Service
  - Diversity
  - Coaching
  - Influence

# Motivation

Two Motivational directions:

- Toward – attractive motivators, the things we seek.
- Away – repulsive motivators, the things we seek to avoid.





**Attractive** motivators are the most powerful of the two.

Two types of motivation:

- Intrinsic – things inside us, knowledge, pride, friendship, etc.
- Extrinsic – things external to us, money, power, certificates, reward, etc.

**Intrinsic** motivators are more powerful.

**we seek candidates that are attracted to intrinsic motivators.**

	Extrinsic	Intrinsic
Attracted		
Repulsed		

# Ego

- Three types of ego:

- **small ego**

little or no self-belief so will accept whatever they are told as better than their own solution and without the courage to voice disagreement anyway.

- **medium ego**

enough self-belief to prefer their own solution over anyone else's and enough courage to argue the case.



- **big ego**

enough self-belief to accept other's solutions and enough courage to admit when they are wrong.



# Performance

Organisational culture is the biggest determinant of productivity

“your organization's productivity is influenced by the production process itself”- Deming

You can only be as productive as your environment allows you to be

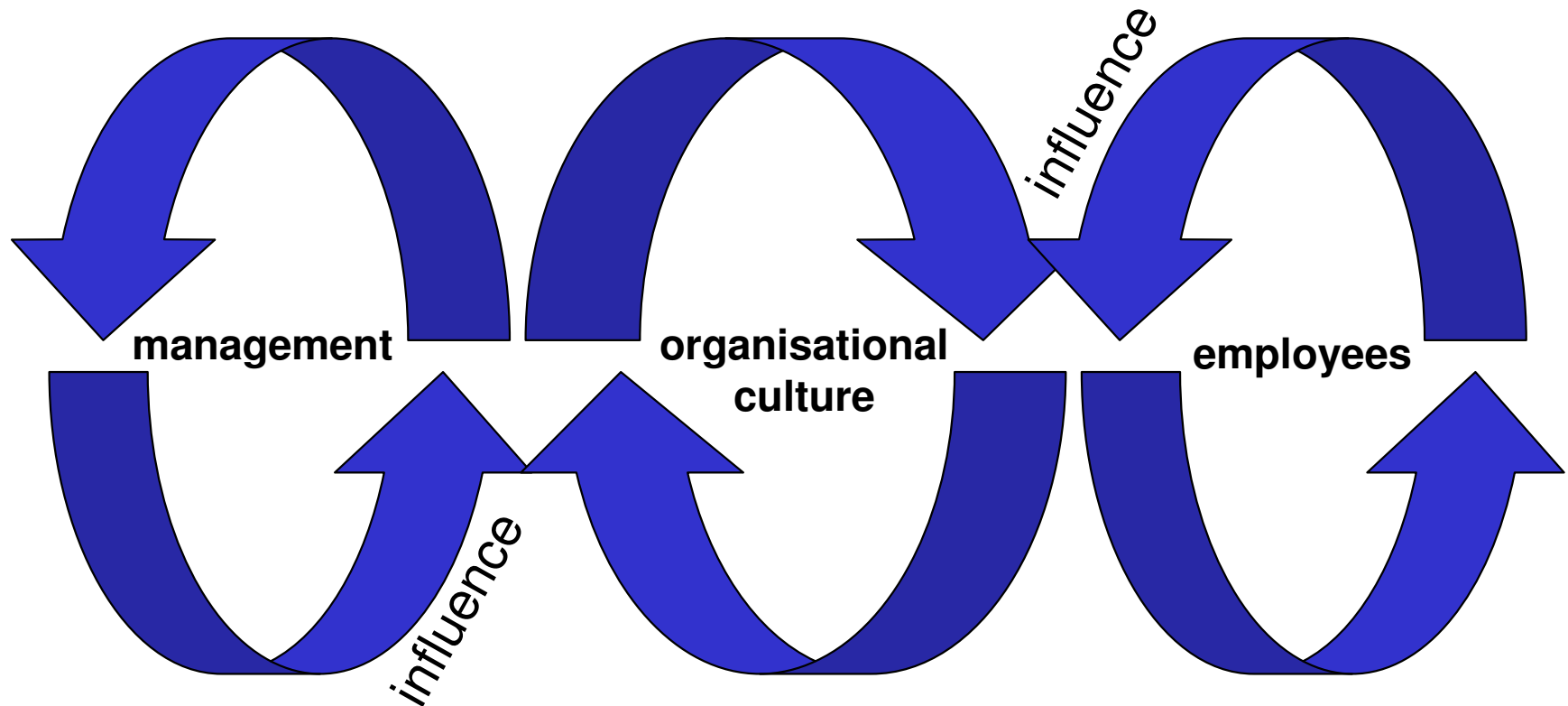


# Enforced Culture



only management can influence the culture and  
influence the way that employees behave  
this has a direct effect on productivity

# Emergent Culture



employees are also allowed to contribute toward the development of the organisation's culture.

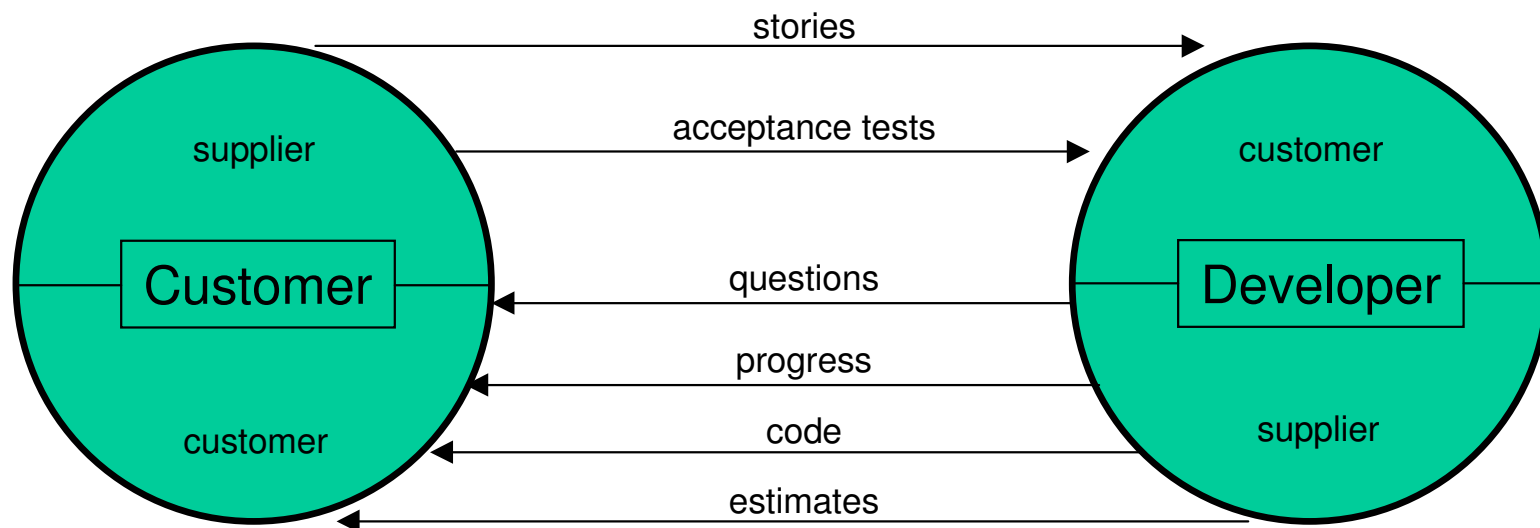
the people doing the work determine how the work is done

# Eradicate Fear

- **Fear of Blame**
  - Don't do the blame thing.
  - Solve the problem as quickly and efficiently as possible.
  - Look for solutions not scapegoats
- **Fear of Failure**
  - It's not a crime to make errors.
  - Not accepting or hiding them is.
- **Fear of Ridicule**
  - There is no shame in not knowing.
  - If you don't know – ask someone.
  - That's what they're there for.

# Encourage Collaboration

every relationship is customer-supplier  
everyone is a customer at some time  
everyone is a supplier at some time





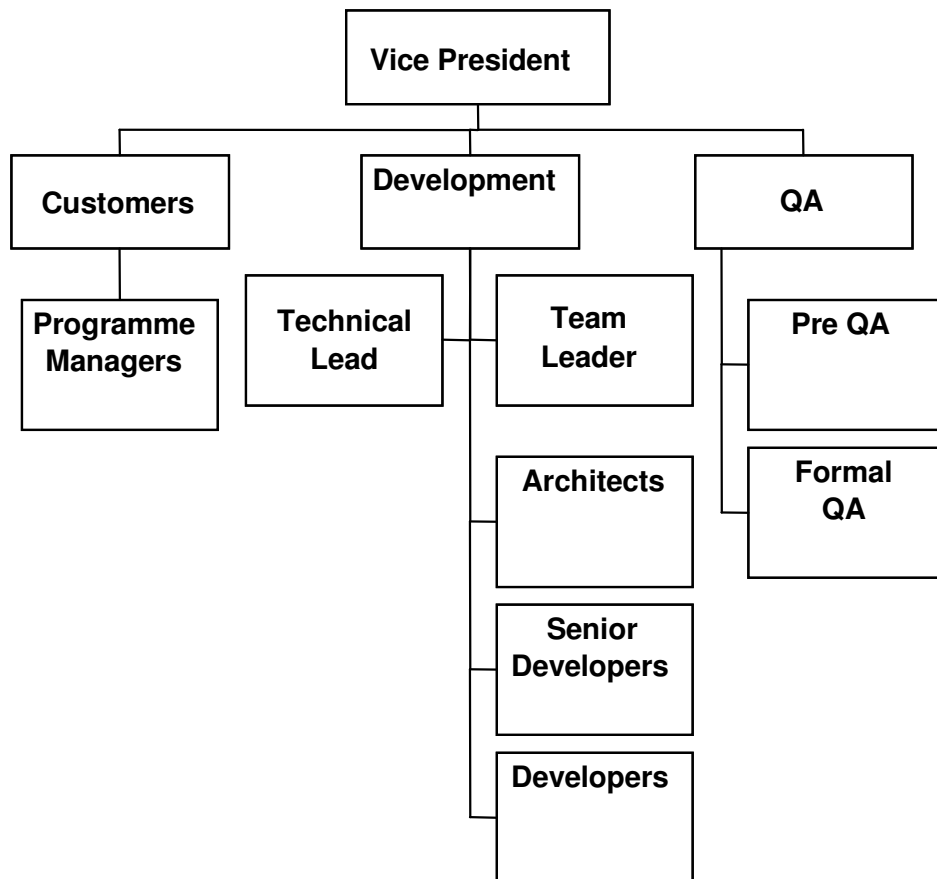
# Competition

- Deming's equation is only true for positive interactions.
- **Negative** interactions have the effect of reducing efficiency.
- Competition between team members:
  - Creates conflict
  - Reduces trust
  - Duplicates effort
  - Causes negative interactions
- The same is true for competition between departments.
- To succeed, we have to have positive interactions.

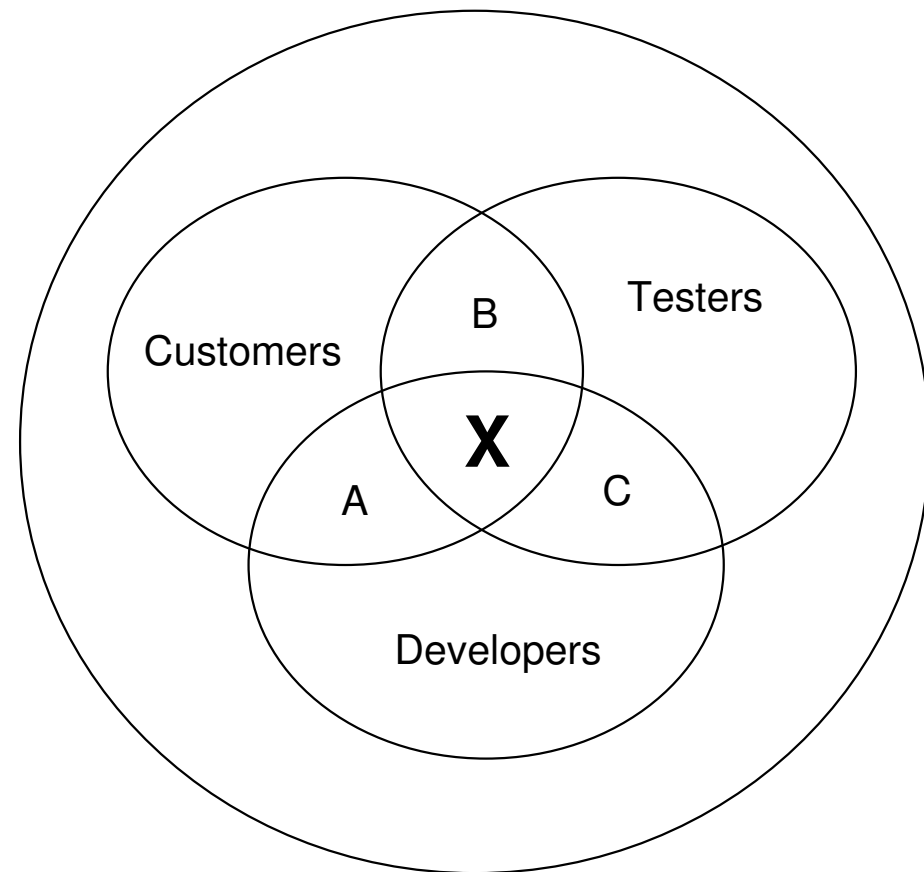


# Structure

Many companies would describe their engineering department as something like this:



This diagram more accurately reflects the structure of an agile development department:



# Use of Metrics

- Performance Indicators
  - Velocity
  - Defect rate
  - Support calls & time to fix
  - Sales
- Measure the team, not the individual
- Make sure you're aware of what you're measuring!
- Beware of averages!



# A Lesson from Quality Management

- Use control limits and not averages.
  - The average plus or minus 3 times the standard deviation
  - Control limits are not specification limits
- Two BIG mistakes for a manager:
  - Treating a common cause of variation as if it's a special cause.
  - Treating a special cause of deviation as if it's a common cause.
- Speeding Tickets & Duvet Days ?



# Game – The Red Beads

- 4, 000 Beads
- 3,800 Black Beads
- 200 Red Beads (5%)
- Paddle – 50 beads per sample
- 2.5 Red Beads per sample  
(fair distribution)



# Game - Conclusions

- Was it fair to reward people in the team with less defects?
- Was it fair to punish people in the team with more defects?
- Were the people in the team able to control the number of defects they produced?
- No its not fair – people were rewarded and punished for things which were beyond their control. How did they feel about that?
- Where did the defects come from?

**They were inherent in the system!!**

- Who had control over the number of defects?
- The manager of the system had control over the number of defects. NOT the team but the manager punished the team for producing defects



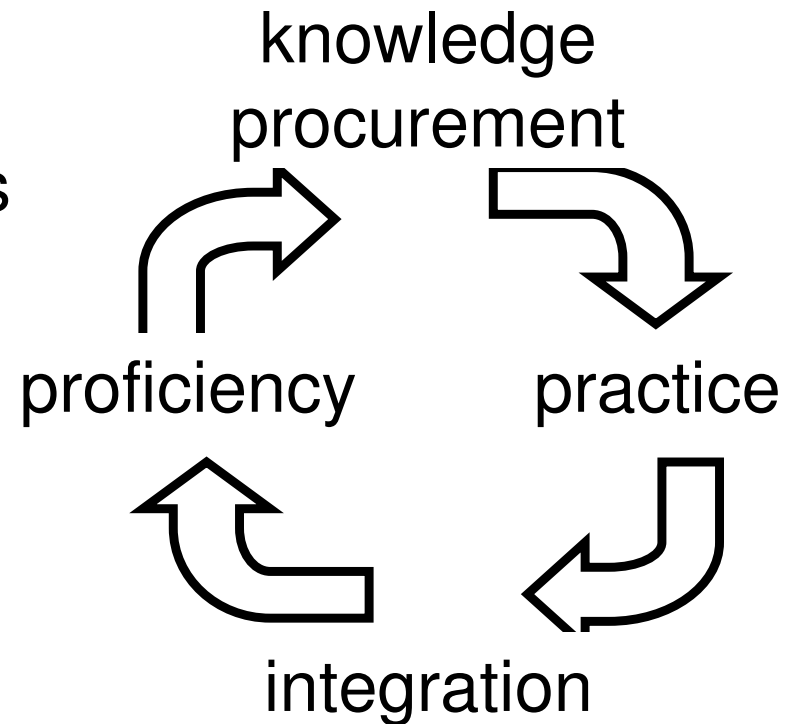
# Red Bead Insights

- Red Bead game shows us that:
- The blame lies with the system not with the individual and it is unfair to place the blame on the individual
- They did the best they could do with the resources available at the time.
- Role of the Manager :
  - Provide and improve the best possible system and to explain the system to the team.
  - To Help the team to achieve the required results.
  - Summarised in the 14 points for managers.

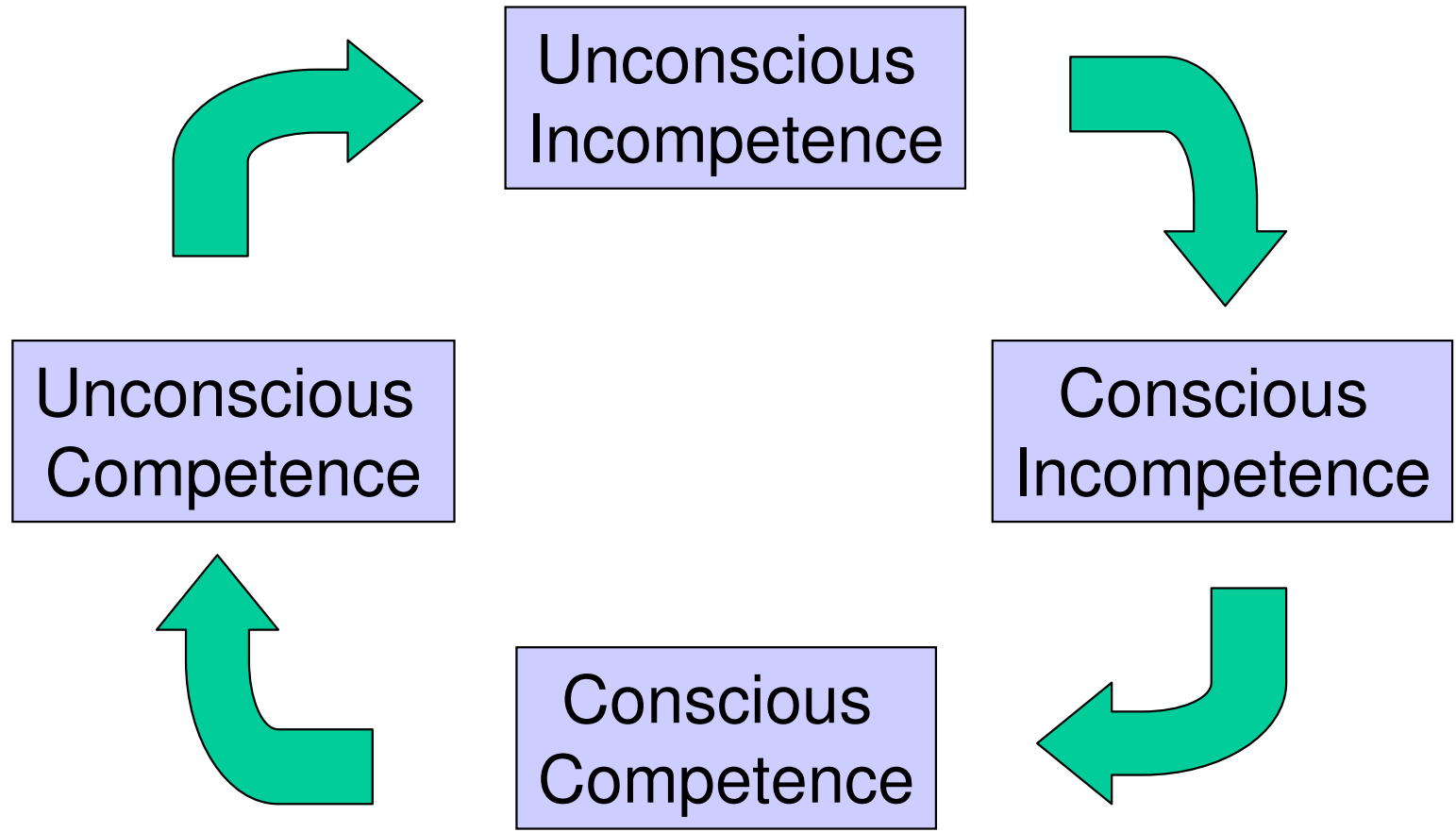


# Improvement

- Teams don't start off great.
- They **learn** to be great
- There is no “**switch**”
- Learning has at least 4 stages



# Learning



**we need to keep moving**

# Retrospectives

- At every opportunity, we need to find appropriate moments to ask four simple questions:
  - What's going well?
  - What's going wrong?
  - What can we do about it?
  - Who else needs to know?



# Retention

- Employee “Churn” is a major problem in our industry
- How can we retain our staff and stop them joining another company?
- Is money the only answer?



# Community

- The office is more than just a building that we go to work in.
- It is a place of social interaction, a community.
- Have food delivered from the local supermarket so that the team can make their own lunch or snacks.
- A lounge where team members can relax and even use the playstation.
- A library that employees may borrow books from with no restrictions.



# Progression

- The need for recognition.
- Professional development programmes with accreditation from a professional body.
- If you're doing it right, retention shouldn't be too big an effort anyway

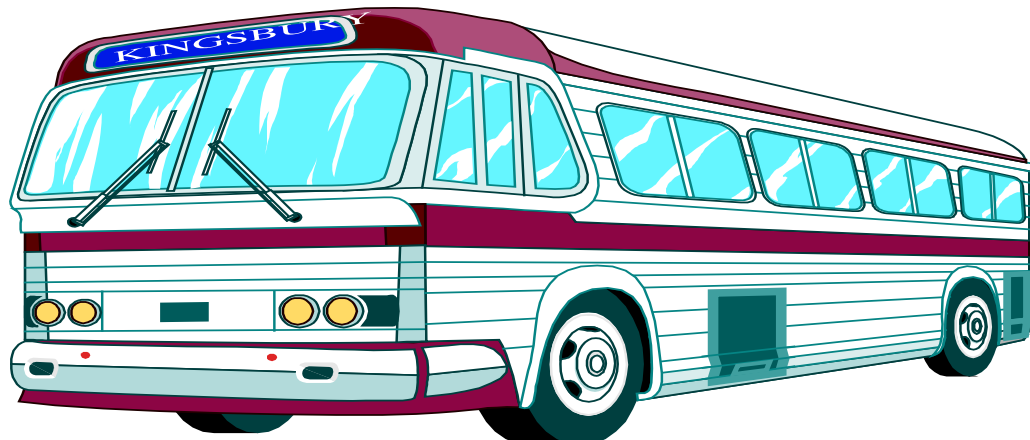


# A Problem Employee...

...Is only a problem while they are an employee.

Two big mistakes for a manager:

- Treating an employee with problems as a problem employee
- Treating a problem employee as an employee with problems



...get the wrong people off the bus

# Recap

## 4 Foci of Management

- Recruitment
  - Recruit the right people
- Performance
  - Provide the right culture for them to work in
- Improvement
  - Teach learning and help them to learn
- Retention
  - Don't let them leave



# Conclusion

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!! it is that easy !!

Good Luck

