# You manage the core of the Economy

An activity invented by the System Dynamics Group, MIT adapted by Peter Taylor, version 9/98

In this simulation you manage the supply for the core of the economy =
the machines that make machines (MMM).

The aim is to make the economy run as smoothly as possible—to meet demands but avoid business cycles or big recessions.

The machines made are of two types:

• more machines to make machines (MMM)

 • machines to make goods (MMG)

Orders for new MMG come from manufacturers of consumer goods, who take into account consumer demand.

Orders for new MMM come from you.

The reason the task is not so simple is that there is a time lag of a year between your making the order and it being fulfilled...
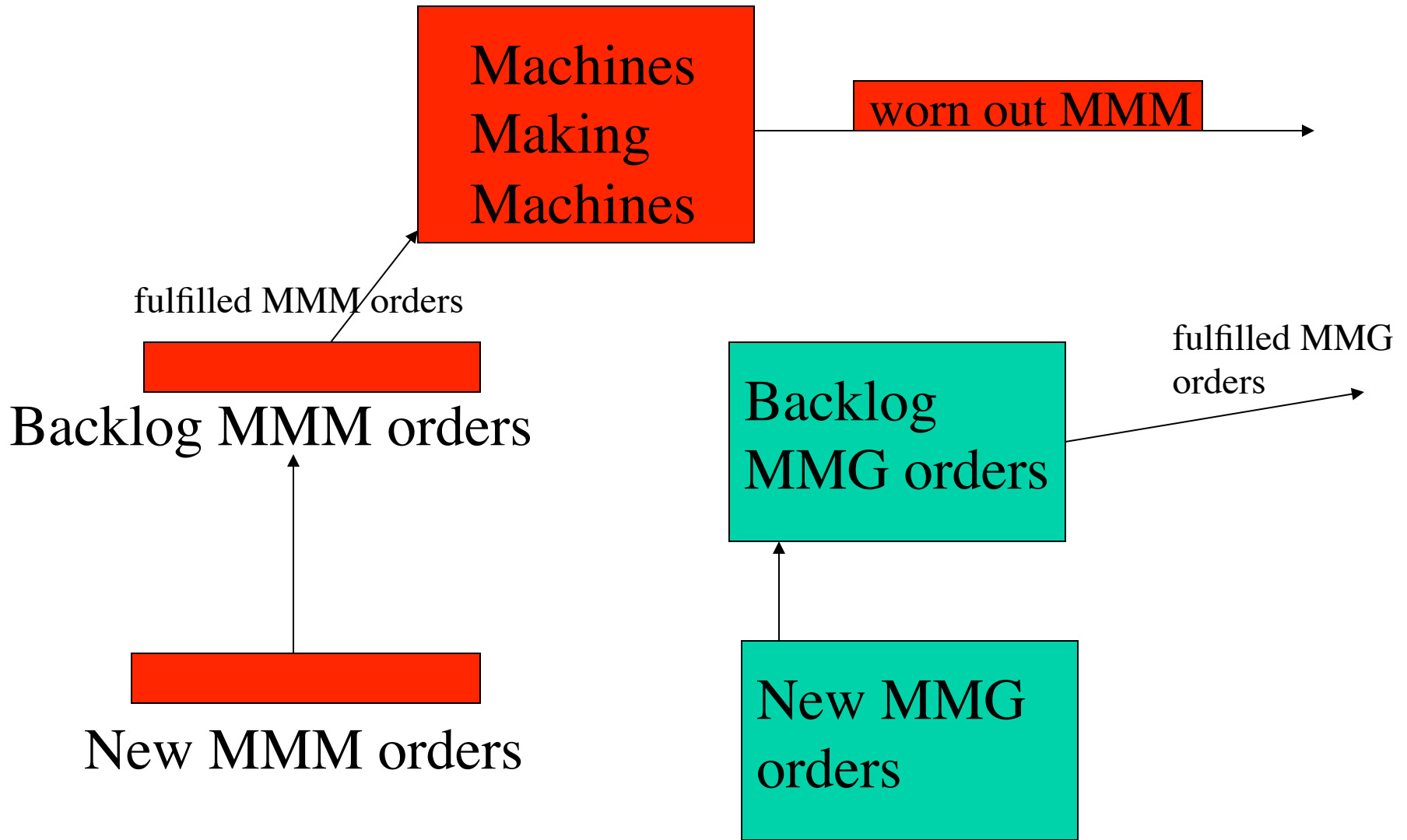
...or longer if your combined backlog of MMM and MMG orders at the start of the year exceeds the capacity for making machines.

# Some details

Capacity for fulfilling orders = existing MMM

If backlog > capacity, the same fraction of MMM & MMG backlog orders are fulfilled

At the end of each year 10% of MMM wear out & are put out of service

Machines Making Machines

worn out MMM

fulfilled MMM orders

Backlog MMM orders

New MMM orders

Backlog MMG orders

fulfilled MMG orders

New MMG orders

*Start of year*

Machines Making Machines

Backlog MMM orders

Backlog MMG orders

*during year*

**Machines Making Machines**

fulfilled MMM orders

Backlog MMM orders

**Backlog MMG orders**

fulfilled MMG orders

*End of year*

Machines Making Machines

worn out MMM →

Backlog MMM orders

New MMM orders

Backlog
MMG orders

*End of year*

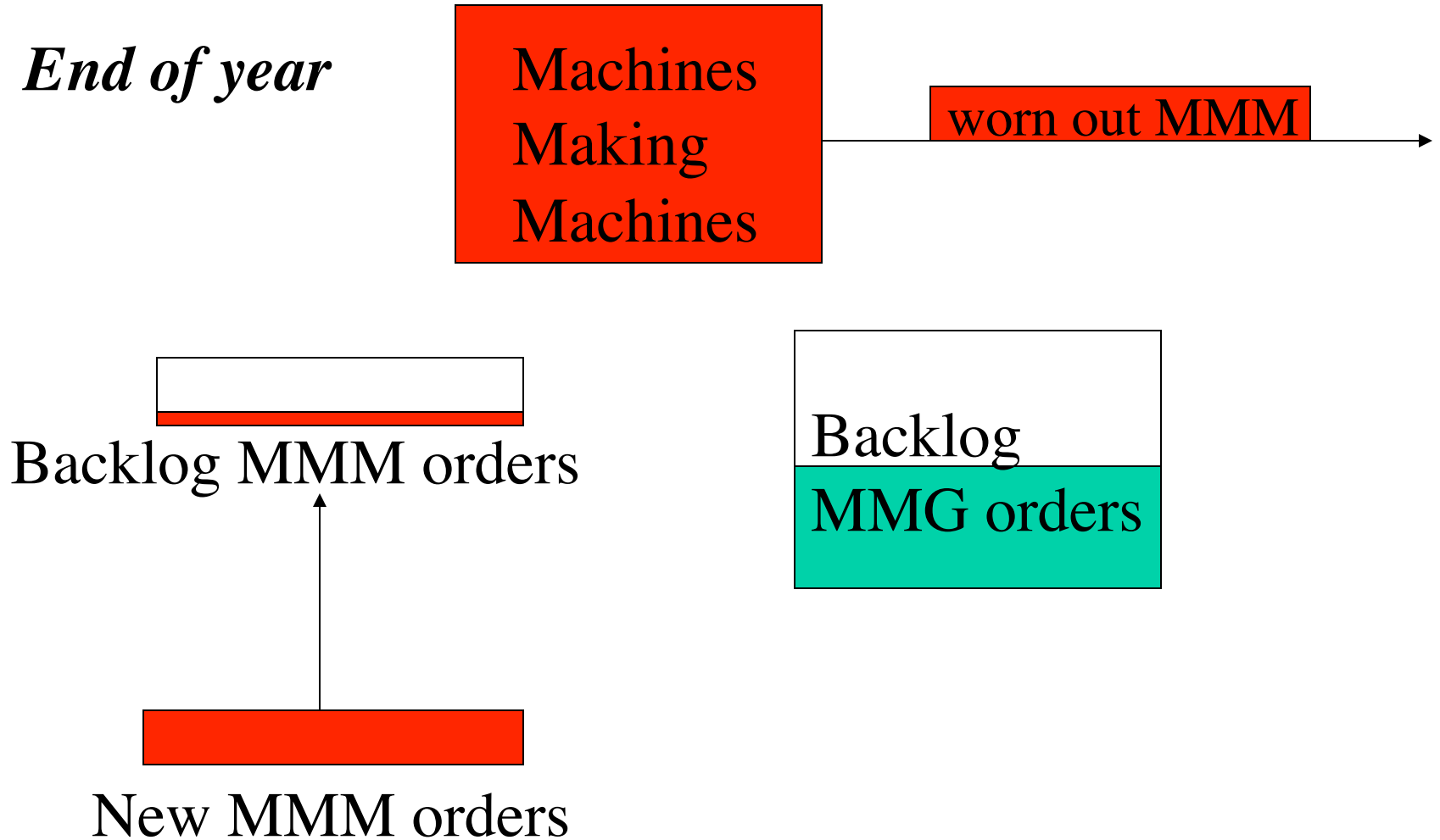Machines Making Machines

Backlog MMM orders

Backlog
MMG orders

New MMG orders

*End of year*

Machines Making Machines

Backlog MMM orders

Backlog MMG orders

Before you run the economy (on a spreadsheet)

It's important that you understand how the figures in the spreadsheet are calculated.

So run through a year's cycle on paper, then you can try the spreadsheet. Finally, you can add more randomness by adjusting the teacher's parameters in column Q of the spreadsheet.

http://www.faculty.umb.edu/pjt/longwave.docx

http://www.faculty.umb.edu/pjt/longwave.xlsx