

# Barking & Dagenham



**Barking and Dagenham is 15<sup>th</sup> in the index of 20 most severely deprived boroughs**

**High financial poverty and poverty of aspiration.**

**Great progress KS2 into KS3, but plenty to do:**

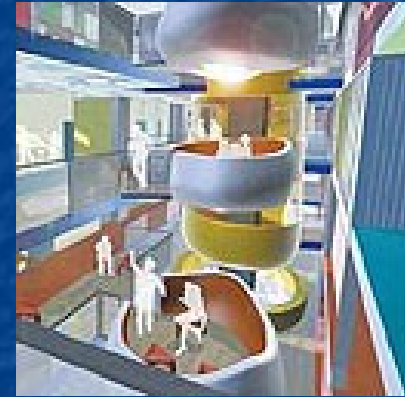
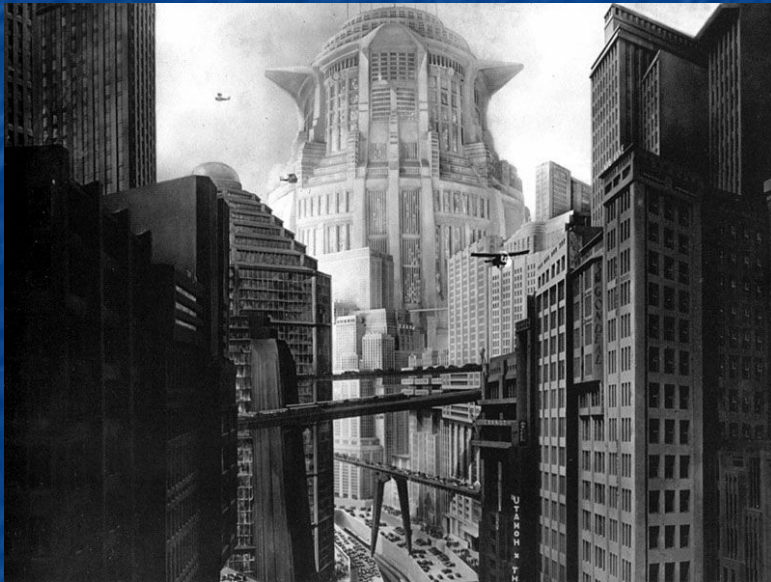
**3% of adults holding an HE equivalent qualification**

# Building schools for the future

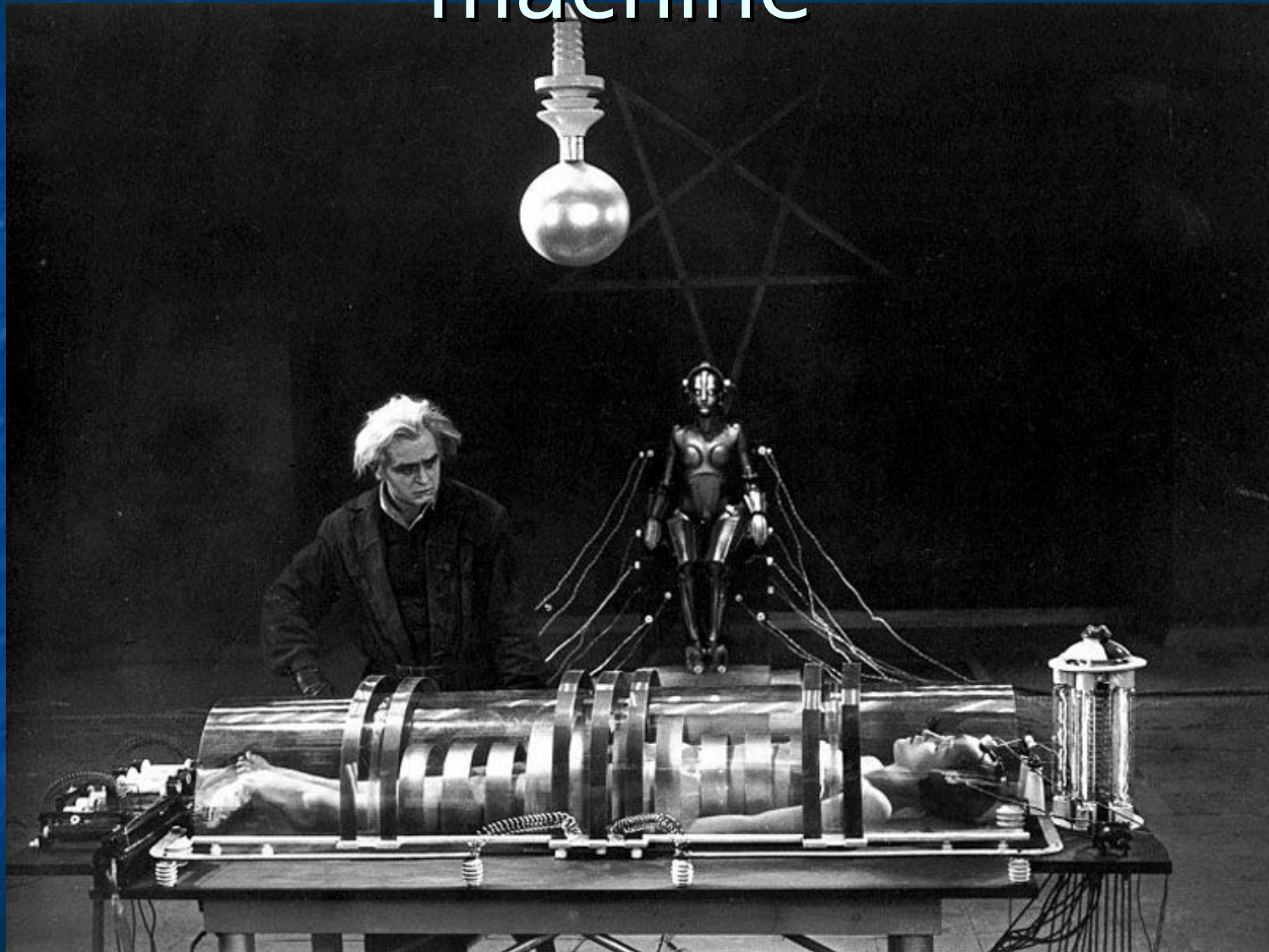
“The aim of Building Schools for the Future is to ensure that secondary education in every part of England has facilities of 21st-century standard within 10 to 15 years from 2005-06.”



# The shape of things to come

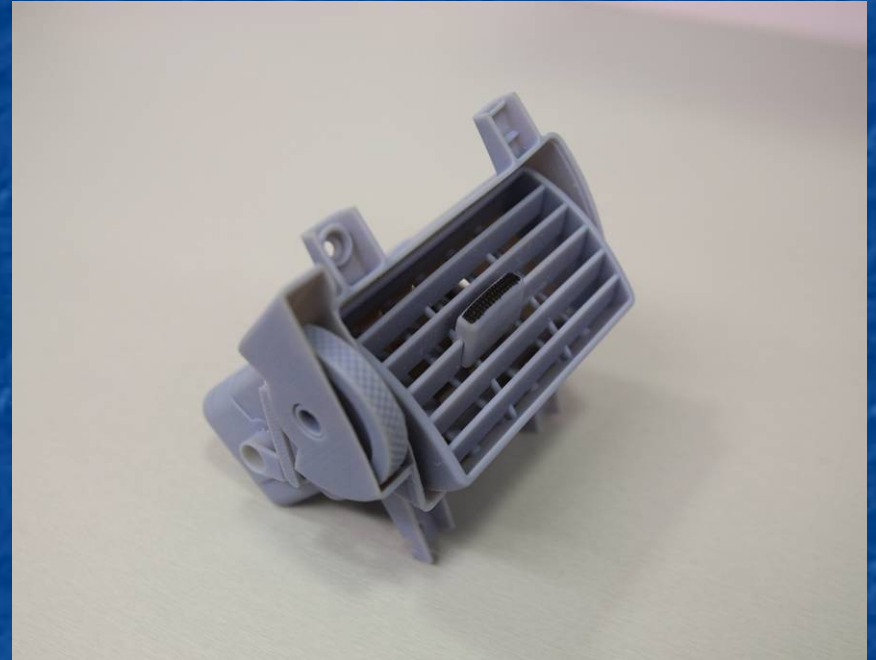


# The non rapid prototyping machine





# The rapid prototyping machine



# School workshops & studios for the future

- Shaped by pedagogy: How do we teach and expect children to learn?
- Interactive whole class teaching
- A view of creative development
- Traditional drawing / 3d modelling
- Lighting
- Individual need for processes arising from design
- Frequent use / scarce use
- Mass component cutting / individual processes
- Mixed hazards



# Real schools

## Jo Richardson Community School





















# Dagenham Park

















# CEME







# Fusion of industry and education









# Interactive whole class teaching



# Influences and variety

- Universal access to 3d modelling
- Increased access to CAM as well as CAD (advanced manufacturing)
- Development of vocational pathways (traditional trade crafts & technical skills)
- Specialist diplomas
- Greater flexibility in post 16
- A need to develop Creativity



# Influence of pre – vocational opportunities

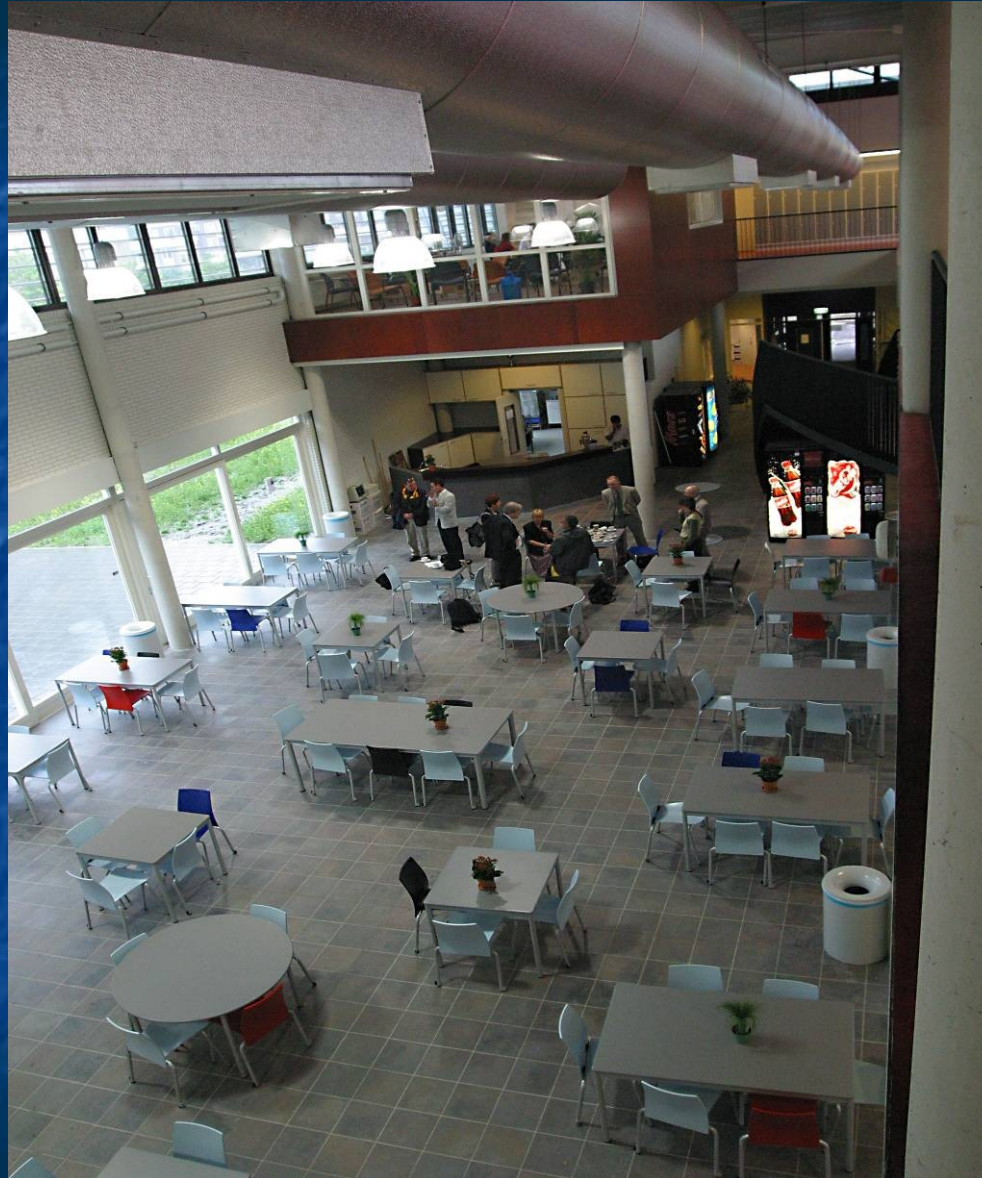
- Larger workshops
- Use of external or outreach tutors
- Continental comparisons
- Specialist diplomas

# Workshops in the Netherlands



















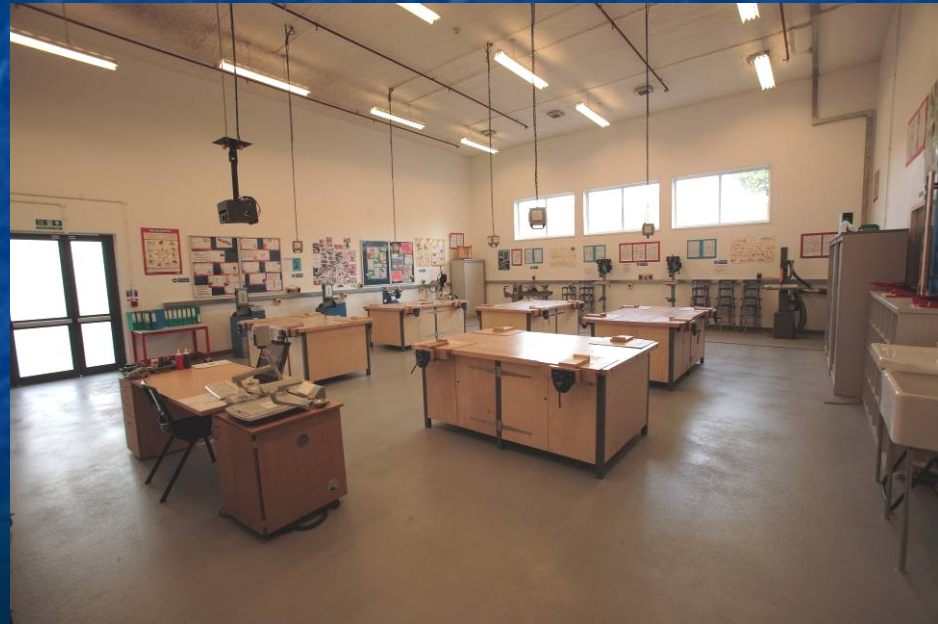




# English pre – vocational workshops







# Lessons from art

## Flexible studios for better 3d work and creative opportunities



















# New processes, New risks

- Physical risk: machines are now interlocked behind panels. Procedures for avoiding abuse
- Air quality is a much greater issue:  
Lasers... extraction or re – circulation?  
Routers.... High speed, light cut, fine dust
- High volume... rapid turnover... large Quantity of particulates and fumes

# New risks, New maintenance

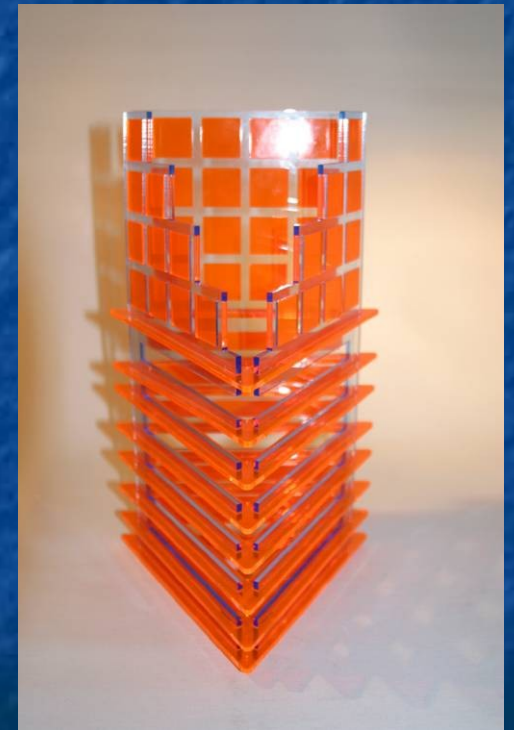
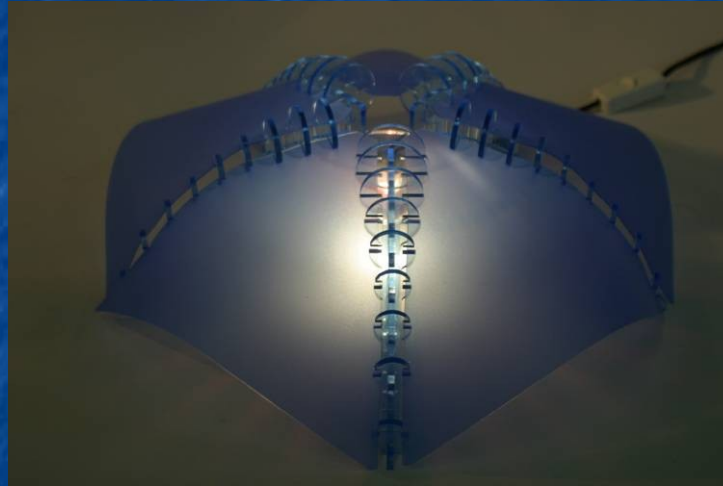
- Filters
- Lenses
- Seals
- Safety interlocks
- BS 4163: 2000



# Router and laser



# Coursework





# New guidance, new B.S?

- Will we have to develop new guidance
- Disability discrimination
- Every child matters places duty of care  
More formally than before
- Shared roles in teaching / partnerships  
means that that there have to be  
reliable mechanisms for safe operation  
of these spaces





The ABSOLUTE GUIDING PRINCIPLE:

**“KIDS NOT KIT”**

Mike Ive