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ICT and Sustainability at the CSC school

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MID4S

Sustainability doesn't come naturally to computing

- **Moore's law:**
 - The number of transistors on an integrated circuit doubles every 18-24 months.



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Sustainability doesn't come naturally to computing

- **Moore's law**
- **Kryder's law**
- **Metcalf's law**
- **Bell's law**
- **Koomey's law**

Sustainability doesn't come naturally to computing



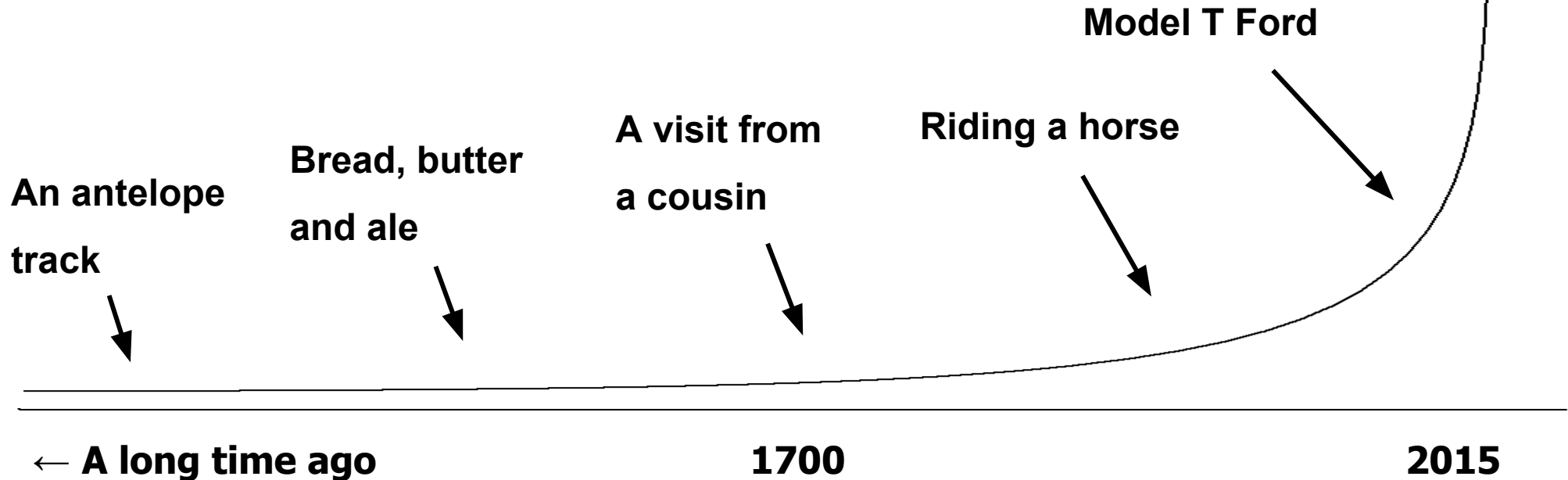
Abacus, mechanical calculator

1950s

2015

We need more energy to get our kicks

**Facebook, Streaming video, Virtual Reality,
Google glasses, weekend trip to Paris**



CSC challenges (GDEE)

- **Getting students on-board**
 - Social consequences, ethics, justice, sustainability
- **Outsource or insource?**
 - Insource - if possible
- **What *kind* of sustainability?**
 - Vanilla (mitigation) or doomsday (adaptation)?

CSC challenges

- **Delivering facts vs discussing values?**
 - Normative content in academic contexts?
- **Stay objective vs disclose own motivation?**
 - Can you expect them to open up if you don't?
- **Handle students' reactions, feelings**
 - Seminar or support group?

CSC challenges

- **Sustainability in general vs sustainability & ICT?**
 - Little previous knowledge
- **Finding an angle**
 - 1. ICT - energy/electricity - CO2/climate change
 - 2. "Energy slave" - 0.6 kWh/day
- **Pragmatic or utopian?**
 - What's the next logical step/every little bit counts vs the big picture/beyond current limitations



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Thank you!

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