

# Miles Padgett: REF Experience

- ▶ Research Physicist
  - ▶ PI of one of 4 UK Quantum Technology Hubs  $\approx$  £40M
  - ▶  $\approx$ 70,000 citations, H-index 135 (Google)
  - ▶ Fellow of the Royal Society, and Research Professor
- ▶ RAE/REF experience
  - ▶ Member of UK REF 2014 sub-panel for Physics and Astronomy
  - ▶ Chair of Hong Kong RAE 2020 for Physical Sciences
  - ▶ Chair of UK REF 2021 sub-panel for Physics and Astronomy
  - ▶ Chair of Hong Kong RAE 2026 for Physical Sciences
- ▶ PVC (Research) University of Glasgow 2014-2019
  - ▶ Reviewed EVERY UoA to analyse and learn from UK REF 2014 results, using panellists drawn from REF 2014 and RAE 2008 assessors.
- ▶ Interim Exec Chair EPSRC (UK Funder) 2023
  - ▶ £900m/year funding of UK Science





# A personal reflection on RAE2008 → REF2021

Proud to have been a researcher, an HEI leader and a panel member/chair, noting the changes that RAE/REF has driven

- ▶ Outputs:
  - ▶ Driving quality not quantity,
  - ▶ Driving clarity of writing and rigour of results
- ▶ Impact:
  - ▶ Driving engagement of researchers and HEI's in the research impact agenda
  - ▶ Articulating the national value of research to government and public
- ▶ Environment:
  - ▶ Driving HEI support for open access and open research
  - ▶ Driving HEI support for career development
  - ▶ Encouraging strategic planning and infrastructure investment across the sector



# What is Impact?

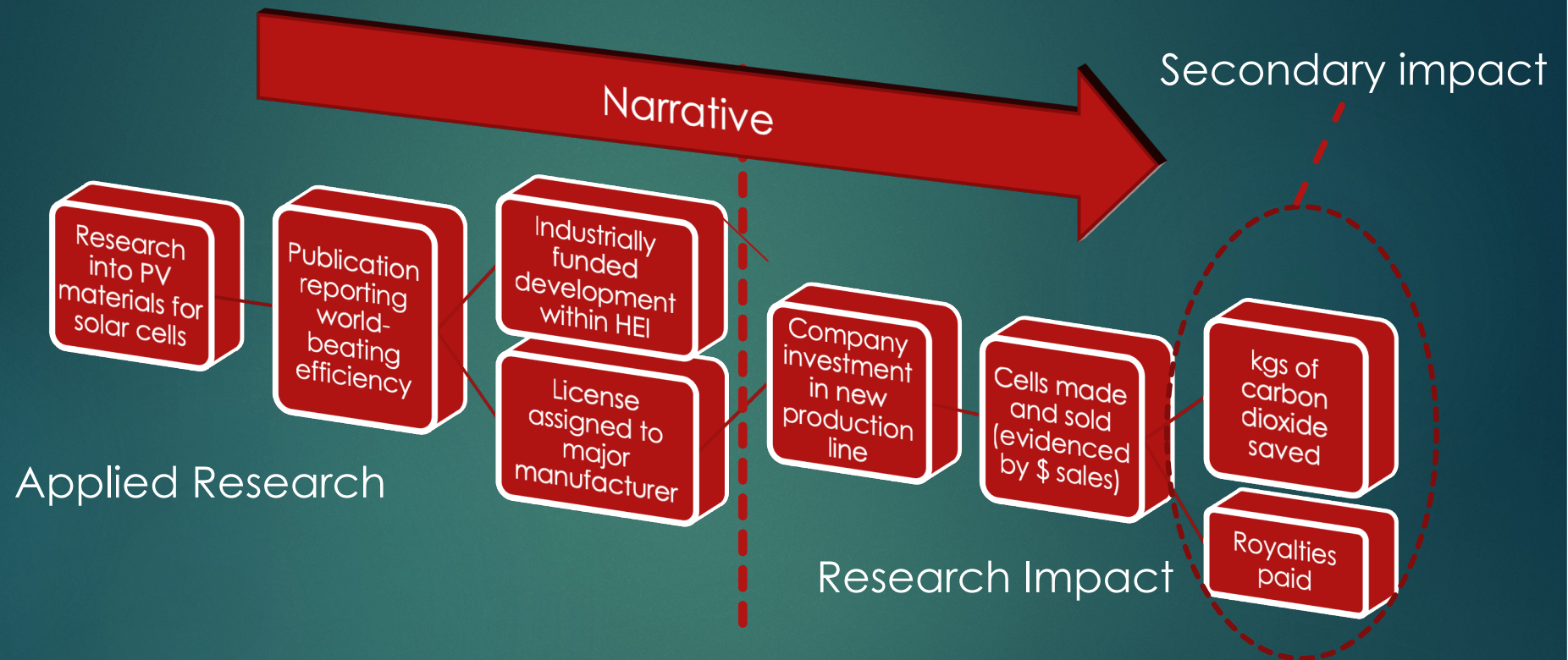
- ▶ Research IMPACT is defined as evidenced change outside the discipline, derived from research
- ▶ The change might be (one is enough!)
  - ▶ Commercial/financial
  - ▶ Health and public well-being
  - ▶ Policy or legislative
  - ▶ Societal engagement/benefit
- ▶ Quality of underpinning research need only be 2\*
  - ▶ But must fall in time window (i.e. publication date)
- ▶ Change must be within assessment period

# What is an Impact Case Study?

- ▶ A ≈4 page structured narrative supported by self-selected data articulating a specific research impact (research completed within the last 20 years, impact achieved in the last 8 years)
- ▶ One impact case study required for every 10-15 "tenured" staff members in each discipline (typically a department of 40 requires 4 case studies)
- ▶ Each impact case study is assessed by panel of disciplinary experts, researchers and users

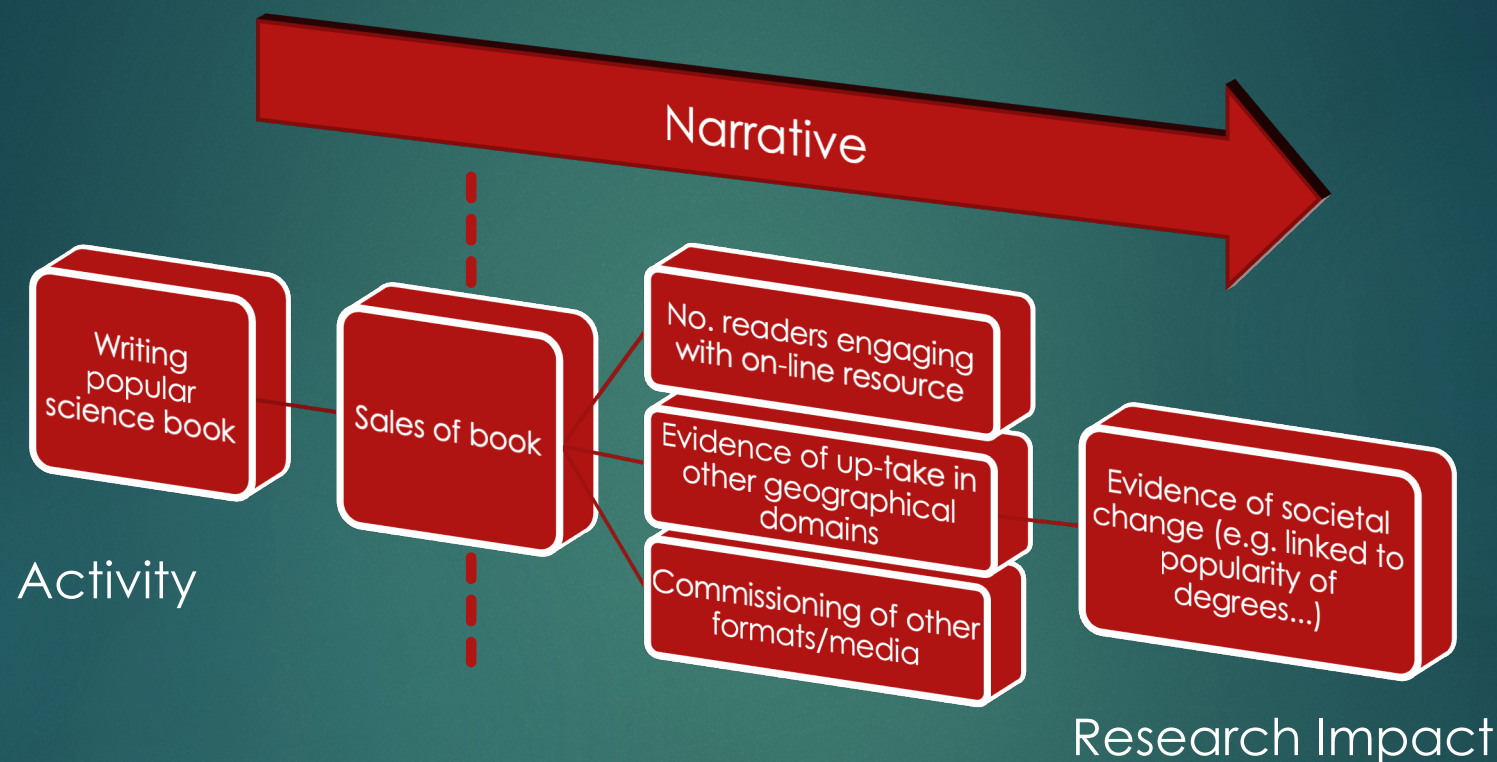


# From Applied Research to Research Impact, e.g.



- Such impacts often derive from many different applied research programmes/ people.
- Don't need to claim sole credit.
  - Only need to explain why this underpinning research in particular was essential part of pathway to the success.
- Don't overlook secondary impacts

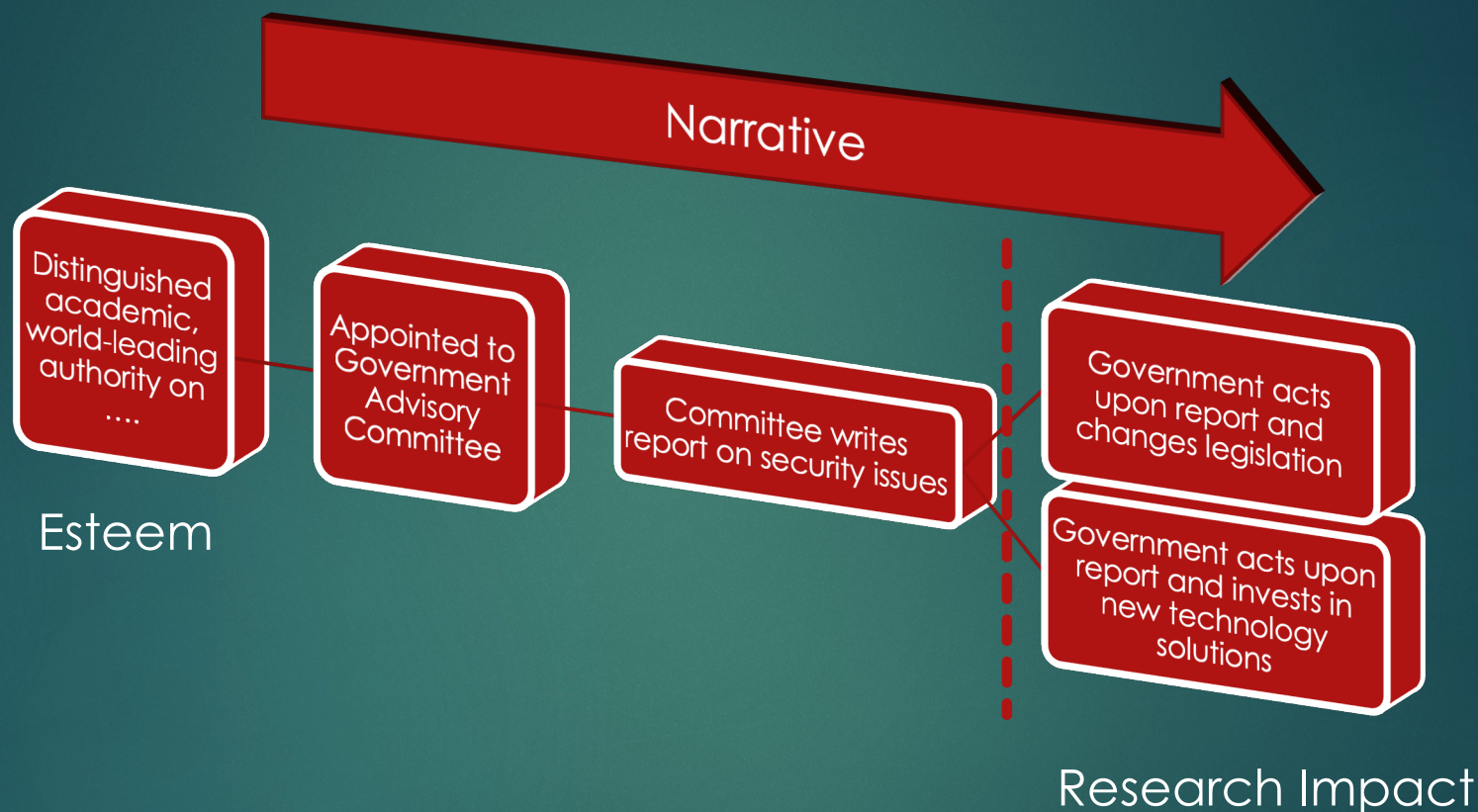
# From Impact Generating Activity to Research Impact, e.g.



- Societal change results from multifactorial drivers.
- Correlation is not (necessarily) sole causation!
- Need to make a plausible argument for causation using both quantitative and qualitative evidence.
- RAE panel takes a view based on balance of probabilities.



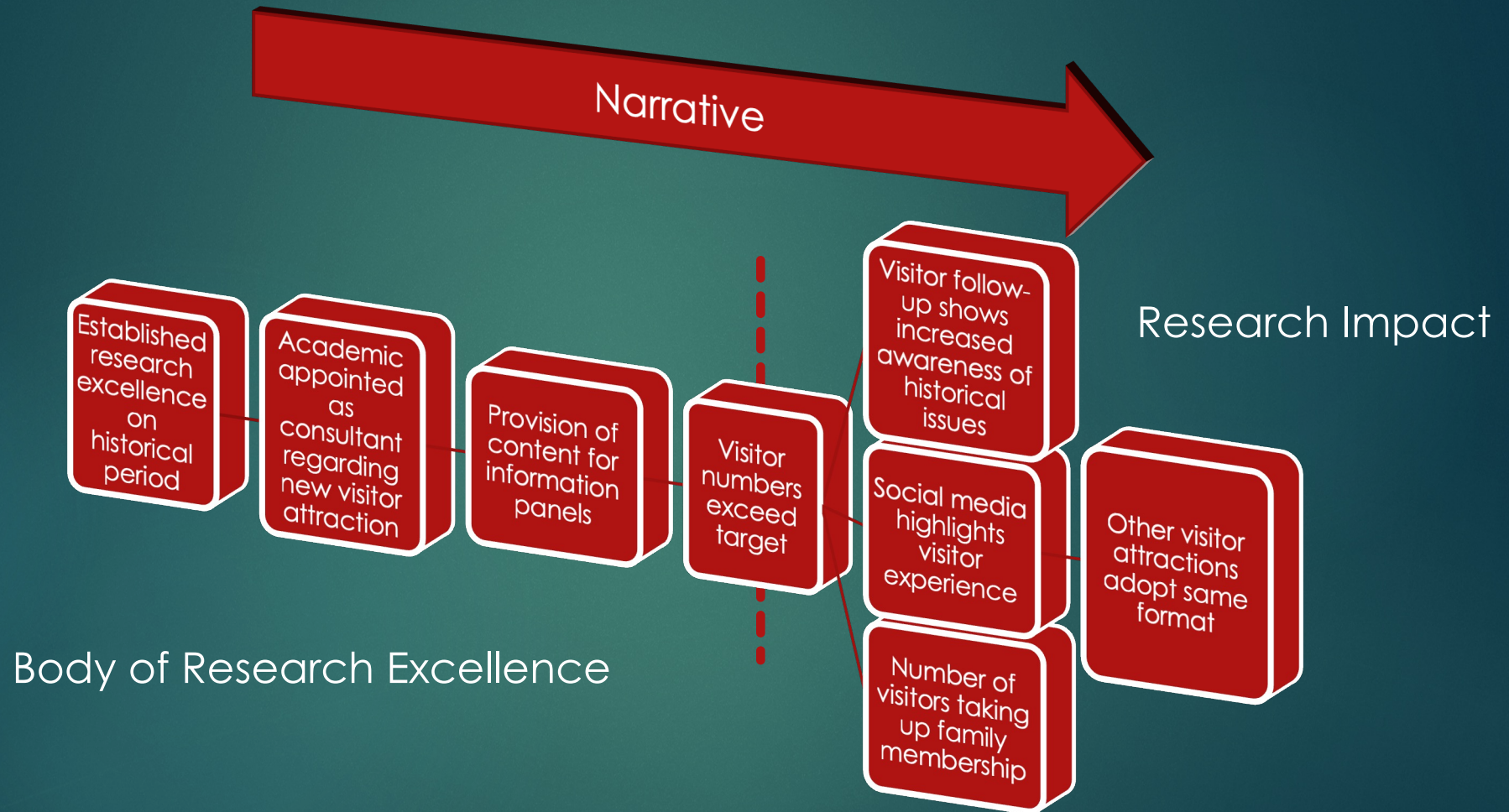
# From Esteem of Academic to Research Impact, e.g.



- Esteem is not impact.
- Challenge is to link specific research (output) to the specific impact.
- Need to evidence the specific role/contribution of academic.
- The panel takes a view based on balance of probabilities.



# From Working in Partnership to Research Impact, e.g.



- Challenge is to link specific research output to content of experience
- Need to evidence the specific role/contribution of the academic.
- Impacts are both financial and societal



# REF assesses impact of research, not of researchers....

## Impact of research

Academic responsible for many seminal papers on short-pulse lasers.

Concepts taken up by numerous companies, launching successful products which acknowledge ground-breaking work of academic.

Impact based on research but achieved independently of academic



## Impact of research driven by researchers

Academic responsible for many seminal papers on OPO lasers.

Academic leads creation of spin-out company based on their research. Spin out company creates employment, and products

The active role of the academic does not make the impact better but probably illustrates a good impact environment



## Impact of researchers

Academic co-ordinates club for disadvantaged youths. Club transforms the number of students from minority backgrounds applying to University.

Societal impact, but not based upon research





# Start at the beginning



- ▶ The impact summary is a vital summary of the impact, NOT of the underpinning research, e.g.
  - ▶ Research into new form of XXX led to launch of a spin-out company, “YYY”, which now employs ZZZ people with annual sales of \$XXX. One key market is YYY surgery, where these products have been used in over ZZZ procedures.
  - ▶ XXX chairs the governmental advisory board for YYY. XXX's research on YYY fed directly to the board's recommendation of YYY leading to new best-practice guidelines on ZZZ. Adoption of these guidelines are now calculated to have saved \$XXX in the cost of YYY within ZZZ alone.
  - ▶ Based on their research in XXX, YYY has now given over ZZZ lectures in schools to over XXX pupils. In associated follow-up, XXX of these pupils have sought additional information on University courses, showing a XX% increase in application rates.



# Dos and don'ts

## DO

- ▶ Ensure that the impact summary is a summary of the impact, not of the research!
- ▶ Check the eligibility of dates for output(s) and for the research impact
- ▶ Design evidence collection into the impact delivery programme
- ▶ Evidence, evidence, evidence the impact claims made
- ▶ Narrate a clear story

## DON'T

- ▶ Confuse impact-generating activity with research impact (i.e. the change itself, outside academia)
- ▶ Confuse academic esteem with research or research impact
- ▶ Assume that research output automatically links to research impact
- ▶ Waste space explaining the research itself



# and finally.....



- ▶ In 2013 I was as nervous, doubtful and skeptical as, no doubt, many of you are now!
- ▶ In 2015 I was proud to be part of a UK academic research community that contributes so much to our society
- ▶ The post REF 2014 analysis of Impact Case Studies by RCUK (now UKRI) was pivotal in persuading UK Government to continue their investment in our research