

THE WIDE ROLE OF INFORMATICS AT UNIVERSITIES

THE AUTHOR

1. INTRODUCTION

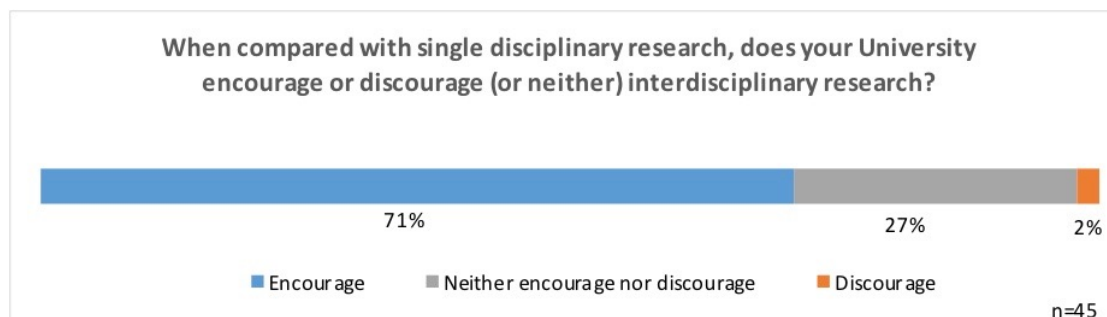
In the 1970s with the advent of the personal computer we entered into the Digital or Information Age. However it has only been in this century with the ubiquity of the internet, the smartphone, and the internet of things that digital has become truly pervasive. How do universities respond to this massive change? Informatics Europe established in 2018 a new working group to investigate what universities are doing to ensure that non-informatics teaching and research is informed by best practice in Informatics.

To better understand the state of affairs on this topic and discover best practices at European Universities, the working group conducted an online survey. We invited heads and members of Academic Informatics/Computer Science/IT Departments (Schools, Faculties, Institutes) to complete a questionnaire which can be seen in the Appendix A. The questionnaire was filled out autumn 2018. XX universities from YY countries filled it out - expand.

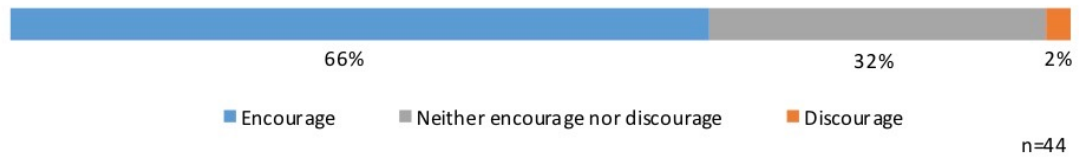
How Informatics (also called Computer Science or Computing) should position itself in a university is a political decision. The extremes we could imagine range from primarily being a service department to primarily being a research area that is isolated from other departments.

2. RESEARCH

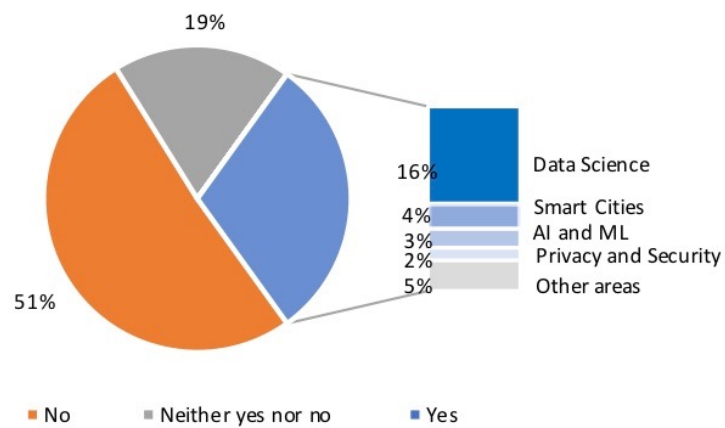
Luis Caires



When compared with single disciplinary research, does your Informatics department encourage or discourage (or neither) interdisciplinary research?



Are there interdisciplinary areas of research where your university could (should) enter but aren't due to lack of university support?

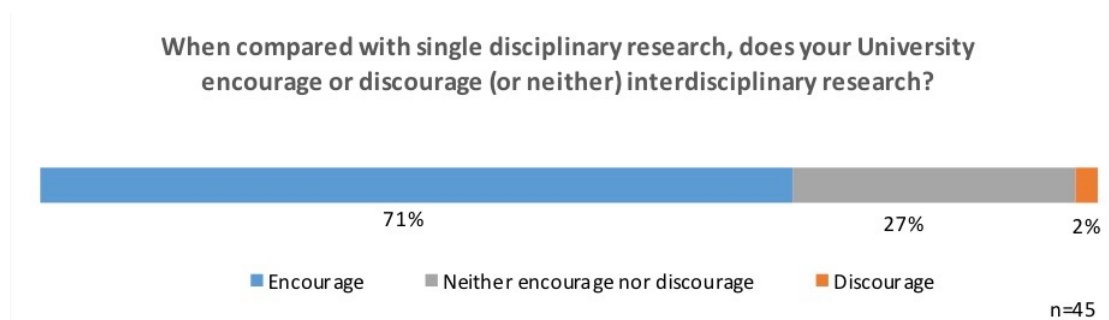
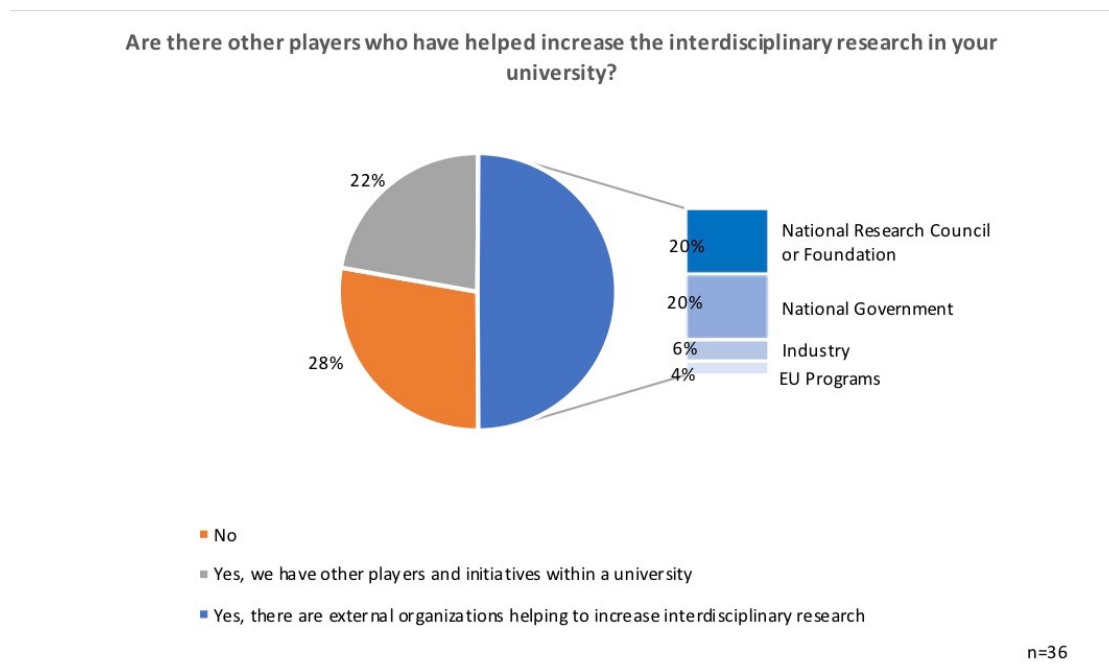


Data Science: Applied Statistics, Bioinformatics, Biomedical Data Science, Data Analysis, Digital Health, Predictive/Precision Medicine

Smart Cities: Data-driven Economy, Smart Building, Remote Sensing, , Energy Management

Other areas: Design Interaction, Game Research, Quantum Computing, Informatics for Environmental Sciences

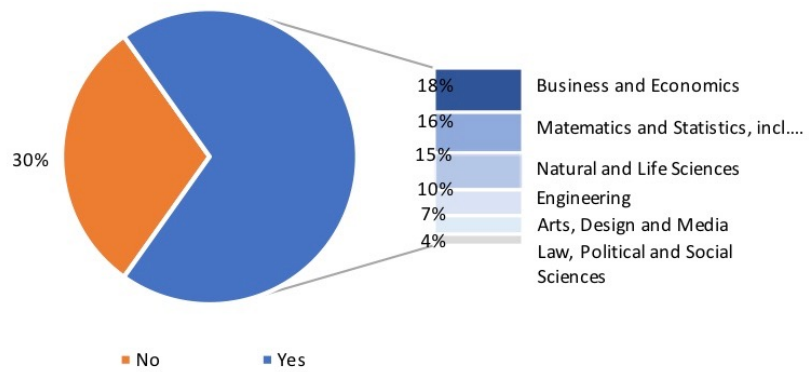
n=37



3. TEACHING

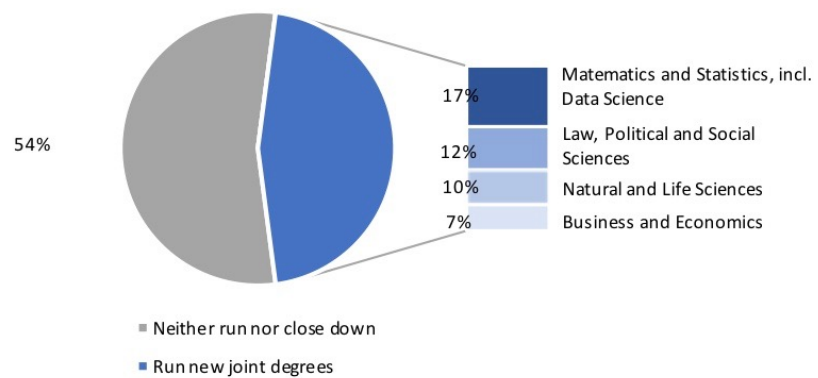
Inmaculada Garcia Fernandez

Does your university run joint degrees (e.g. X and Informatics, Informatics and X, X with Informatics, Informatics with X). If yes, what are they?

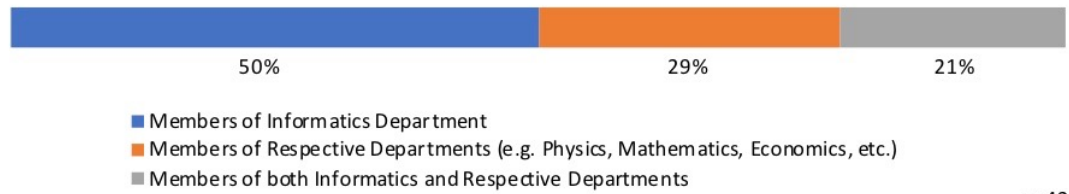


n=46

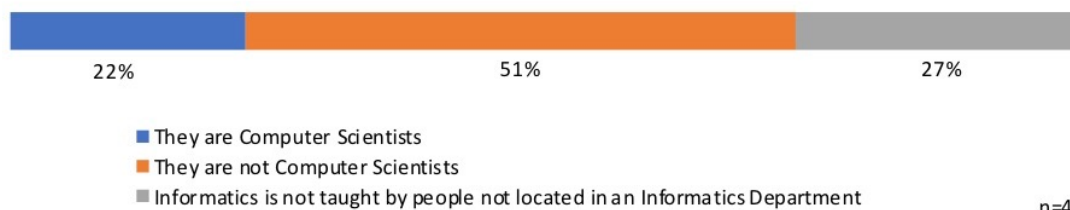
Are there plans to run new joint degrees or to close down joint degrees?
If yes what are they?



n=46

Who teaches the Informatics component of non-Informatics degrees?

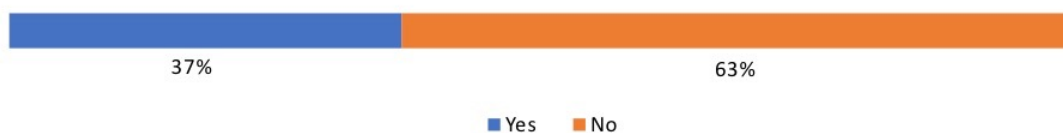
n=42

If Informatics is taught by people not located in an Informatics department are they Computer Scientists by training or research?

n=41

4. PEOPLE

Elisabetta Di Nitto

Does your university explicitly advertise/hire academics who focus on interdisciplinary research?

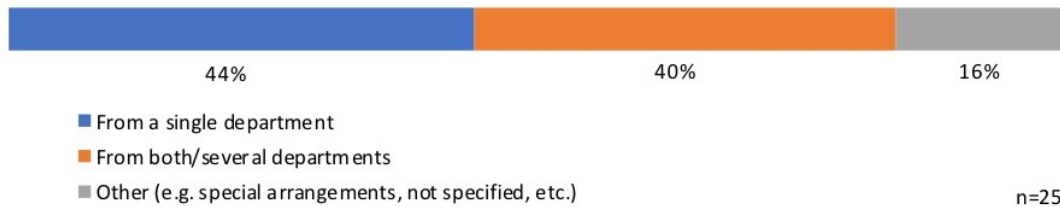
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Are they rooted in a department, have a joint appointment across departments, or rooted in a centre?



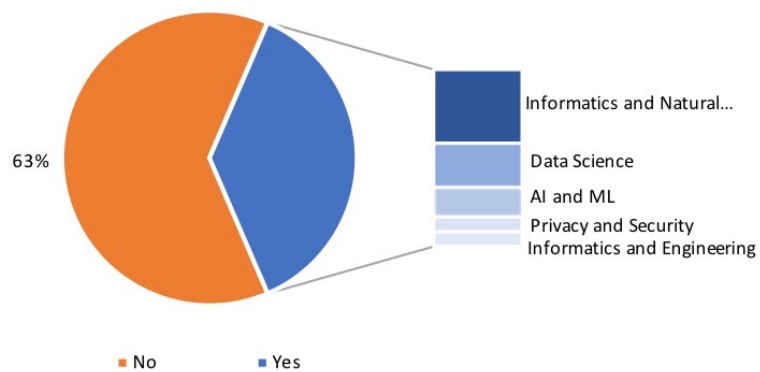
n=31

How is their quality judged for both appointment and for promotion? For example are they judged according to the criteria of one of the departments or both. Are the people who judge from a single department or both?



n=25

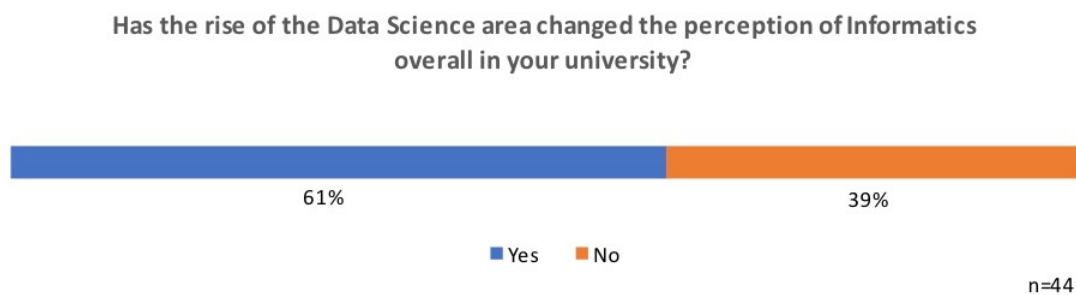
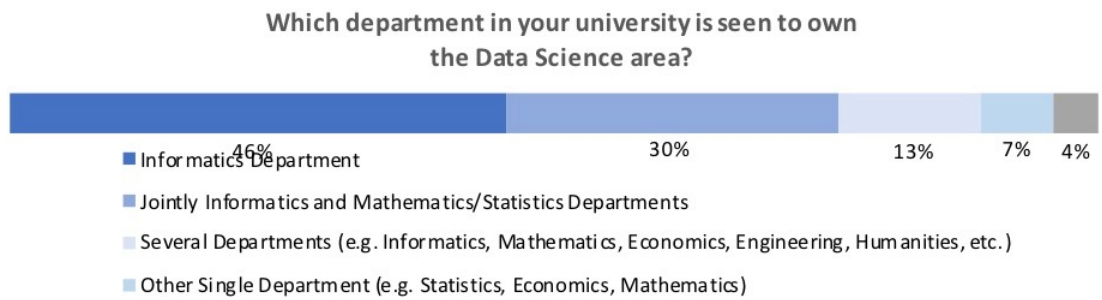
Are there any initiatives planned to hire in interdisciplinary areas?



n=43

5. DATA SCIENCE

Eduard Groller

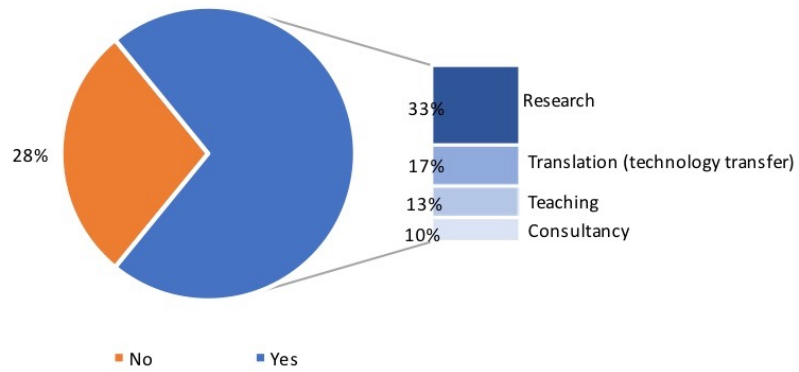


6. STRUCTURE

Luis Caires

Inmaculada Garcia Fernandez

Does your university set up centres for interdisciplinary work?
If yes, for what are these centres?



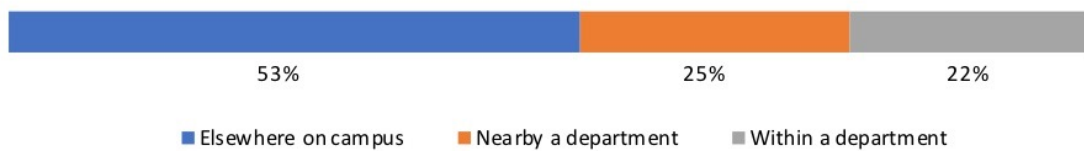
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Are they rooted in a single department, owned by the departments involved or independent?



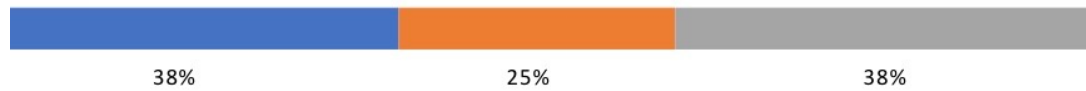
n=36

Are they rooted in a single department, owned by the departments involved or independent?



n=36

How are any centres funded? Does the university provide any money to startup or are they funded by external money?



■ Internal funding (University, departments money)

■ External funding (money from local and national government, national and EU research funds, industry)

■ Both internal and external funding

n=32

Are there plans to set up more centres or to close centres?

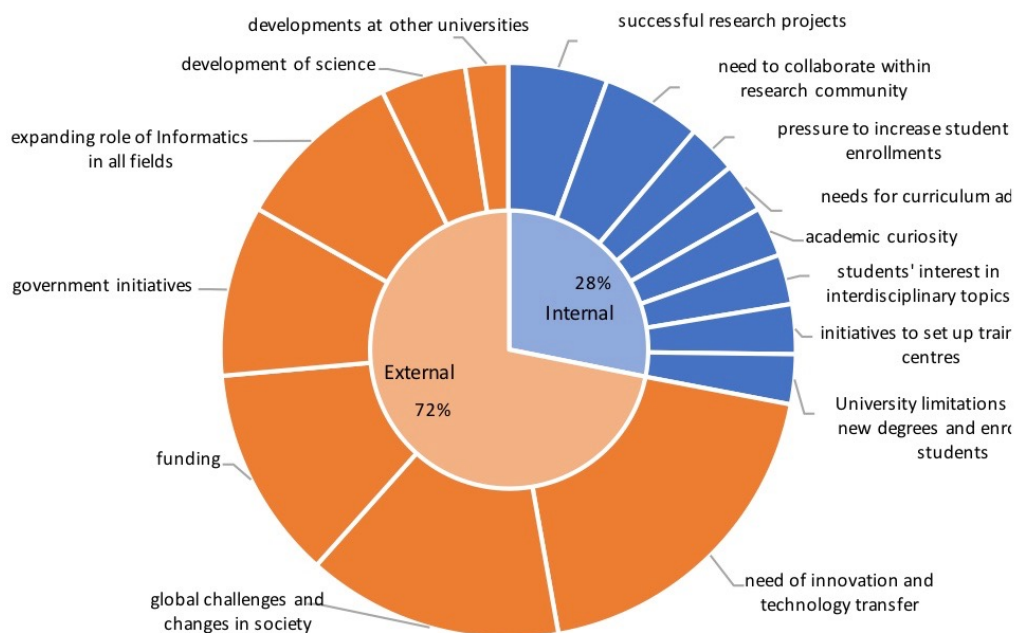


■ Set up more centres

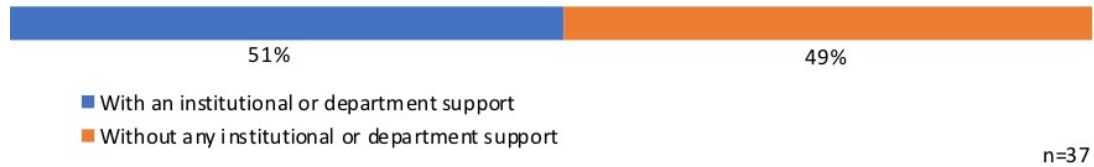
■ Neither set up nor close centres

n=41

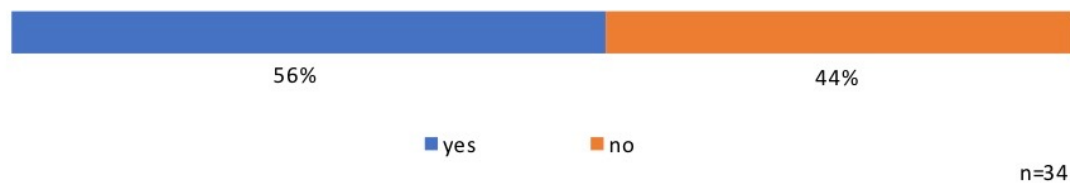
What are the drivers or pressures (both internal to the department /school/ faculty/ university and external to the university) that you see on the horizon that may lead to new activity?



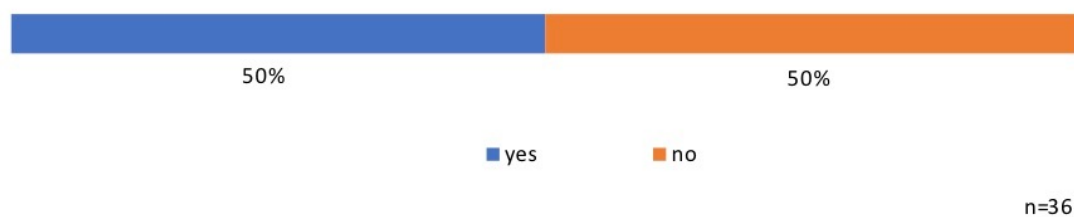
Is substantial interdisciplinary work undertaken by academics without any institutional or department support?



Are there any centres for interdisciplinary work that have been set up due to a strategic decision by the university or department/school/faculty rather than as supporting activities of existing faculty?



Does your university have something in their official strategy to widen the role of Informatics or to encourage interdisciplinary research?



APPENDIX A. SURVEY: THE WIDE ROLE OF INFORMATICS AT UNIVERSITIES

(1) Research

- (a) When compared with single disciplinary research, does your university encourage or discourage (or neither) interdisciplinary research? If so how? (e.g. funding, time, physical centres) Encourage Discourage Neither encourage nor discourage
- (b) Does your Informatics department encourage or discourage (or neither) interdisciplinary research? If so how? Encourage Discourage Neither encourage nor discourage
- (c) Are there interdisciplinary areas of research where your university could (should) enter but aren't due to lack of university support? If so what are they?
- (d) Are there other players who have helped increase the interdisciplinary research in your university? For example has a funding body focused a programme on interdisciplinary PhD studentships which academics applied for? If so what external organisations and what programmes have increased interdisciplinary research at your university?
- (e) Please comment on any advantages or disadvantages you perceive of your university's arrangements.

(2) Teaching

- (a) . Does your university run joint degrees (e.g. X and Informatics, Informatics and X, X with Informatics, Informatics with X). If yes, what are they? Yes No
- (b) Are there plans to run new joint degrees or to close down joint degrees? If yes what are they? Run new joint degrees Close down joint degrees Neither run nor close down
- (c) Who teaches the Informatics component of non-Informatics degrees? For example, is programming taught to Physicists by members of the Physics department, of the Informatics department or is there a servicing organisation within your university that teaches Physics students to code (or some other mechanism)?
- (d) If Informatics is taught by people not located in an Informatics department are they Computer Scientists by training or research? They are Computer Scientists They are not Computer Scientists Informatics is not taught by people not located in an Informatics department
- (e) Please comment on any advantages or disadvantages you perceive of your university's arrangements.

(3) People

- (a) Does your university explicitly advertise/hire academics who focus on interdisciplinary research? Yes No
 - (b) Are they rooted in a department, have a joint appointment across departments, or rooted in a centre? Rooted in a department Have a joint appointment across departments Rooted in a centre
 - (c) How is their quality judged for both appointment and for promotion? For example are they judged according to the criteria of one of the departments or both? Are the people who judge from a single department or both?
 - (d) Are there any initiatives planned to hire in interdisciplinary areas? Yes No
 - (e) Please comment on any advantages or disadvantages you perceive of your university's arrangements.
- (4) Data Science
- (a) Which department in your university is seen to own this area? Is it Informatics, Statistics, jointly or somewhere else? Informatics Department Statistics Department Jointly Informatics and Statistics Department Somewhere else (please specify)
 - (b) Has the rise of this area changed the perception of Informatics overall in your university? Yes No
 - (c) Please comment on any advantages or disadvantages you perceive of your university's arrangements.
- (5) Structure
- (a) Does your university set up centres for interdisciplinary work? If yes can you say which they are? Yes No
 - (b) Are they for research, translation (technology transfer), consultancy, and/or teaching? Research Translation (technology transfer) Consultancy Teaching
 - (c) Are they rooted in a single department (say which one), owned by the departments involved or independent? Rooted in a single department Owned by the departments involved Independent
 - (d) Are they physically located within a department, nearby or elsewhere on campus? Within a department Nearby a department Elsewhere on campus
 - (e) How are any centres funded? Does the university provide any money to startup or are they funded by external money? Does the university provide longer term money?
 - (f) Are there plans to set up more centres or to close centres? If so what will they be? Set up more centres Close centres Neither set up nor close

- (g) What are the drivers or pressures (both internal to the department/ school/faculty/university and external to the university) that you see on the horizon that may lead to new activity?
- (h) Is substantial interdisciplinary work undertaken by academics without any institutional or department support? Without any institutional or department support With an institutional or department support
- (i) Are there any centres for interdisciplinary work that have been set up due to a strategic decision by the university or department/school/faculty rather than as supporting activities of existing faculty? If so which centres?
- (j) Does your university have something in their official strategy to widen the role of Informatics or to encourage interdisciplinary research? If so what is it?
- (k) Please comment on any advantages or disadvantages you perceive of your university's arrangements.
- (l) Is there anything we have missed in the survey that you wish to tell us?