

# Risotto, Paella, Rice Pudding!

## 101 Ways with Existing Datasets

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Research and Information Unit

# Some definitions and parameters

## ■ Institutional Research:

- collecting data on institutional performance
- collecting data on the institutional environment
- analysing and interpreting the data collected
- and, transforming the results of the data into information that support decision-making in planning and management. *Saupe, 1980; Maassen, 1986*

## ■ Data mining:

- designed to handle large amounts of existing data, usually collected for other purposes
- designed to uncover the unexpected and unknown
- 'bottom up' investigation: does not presume anything - discover unknown patterns which would not normally be spotted
- great potential to improve student learning experience in HE
- great opportunities for knowledge discovery and understanding the student experience better *Zhao and Luan, 2006*

# Institutional Context

- 'New' university
- Largely vocational portfolio
- Students from wide range of backgrounds
- Strength - success in taking students with modest entry profiles through to degrees

# Changing contexts of UK HE

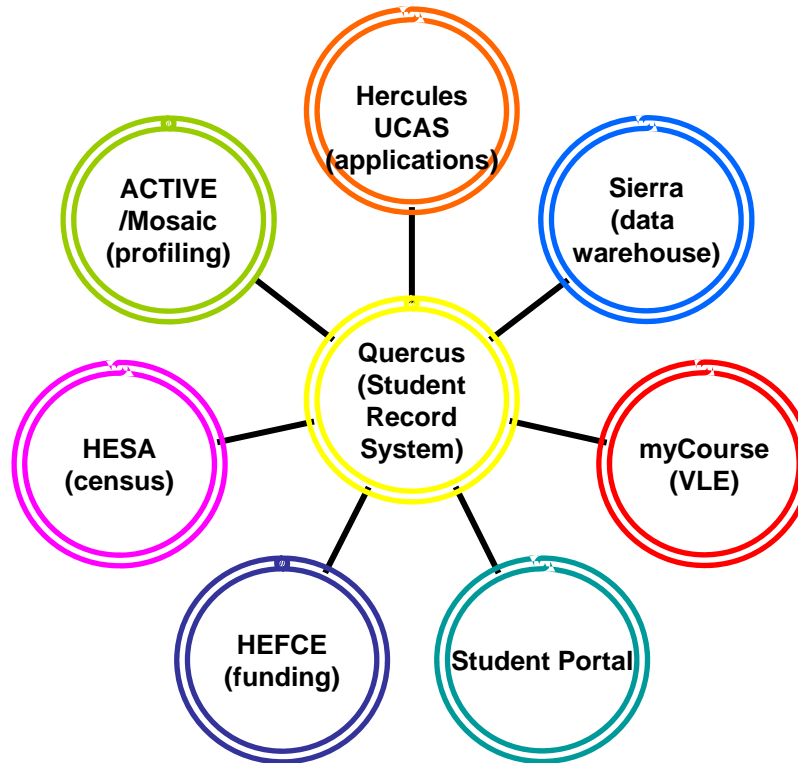
- Changing demographic base
- Skills agenda: employer involvement
- Increasing marketisation of sector (fees)
- Growing significance/importance of IR

# Research and Information Unit: who we are, what we do....

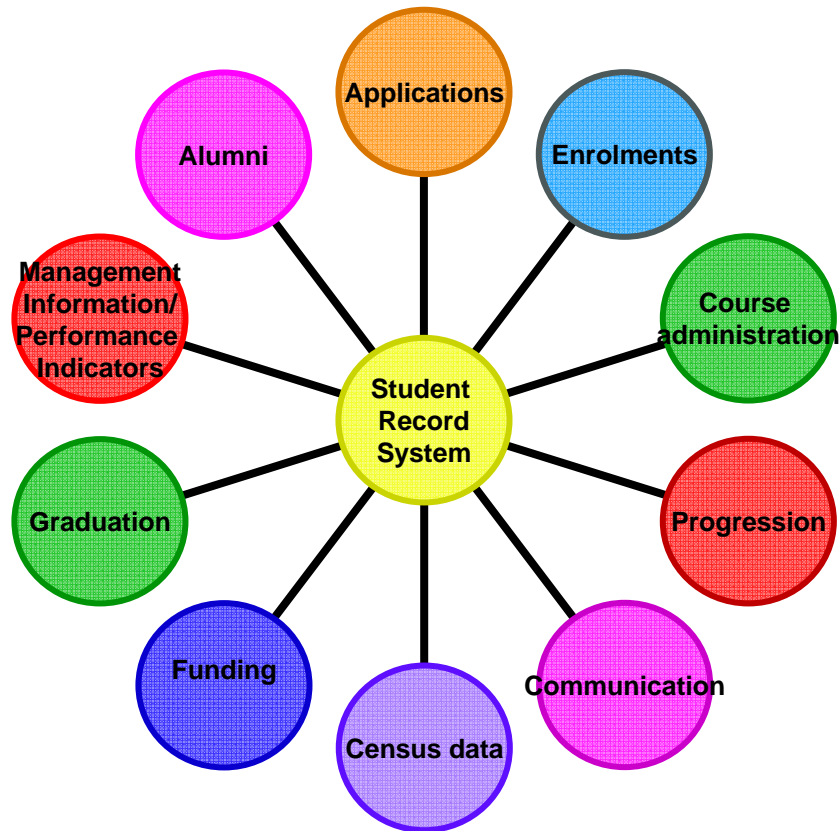
■ Function: to inform university policy and practice by providing evidence in support of policy and management decisions



# Overview of the Student Record System



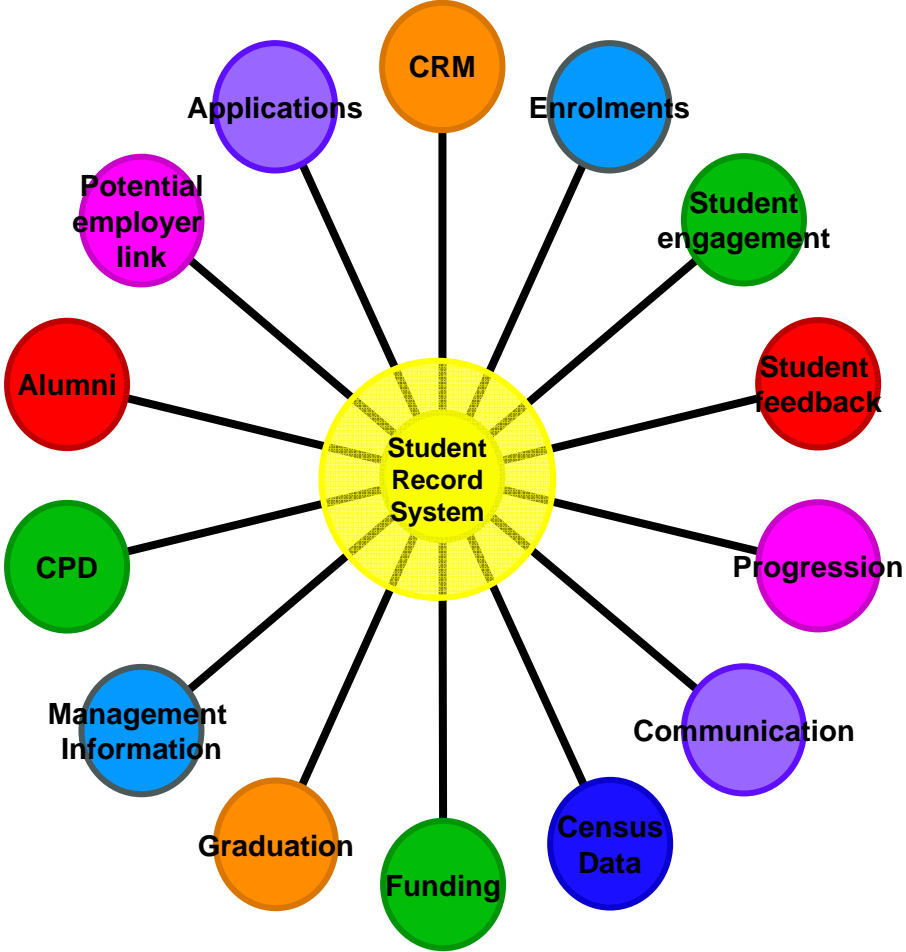
# Routine uses of the Student Record System



# Exploiting the potential of the Student Record System



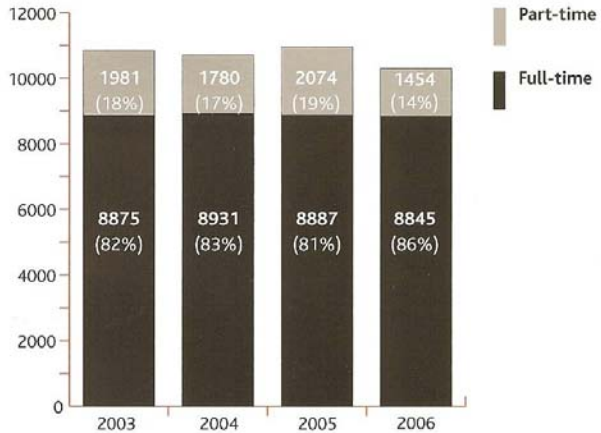
# One System, Many Uses



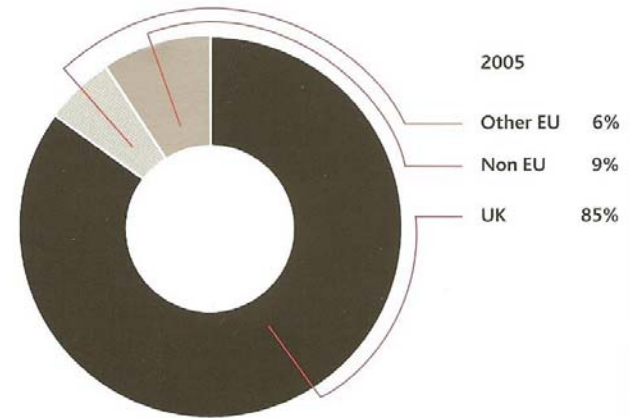
# Putting it into practice... some examples

# Student Profiling - At a Glance

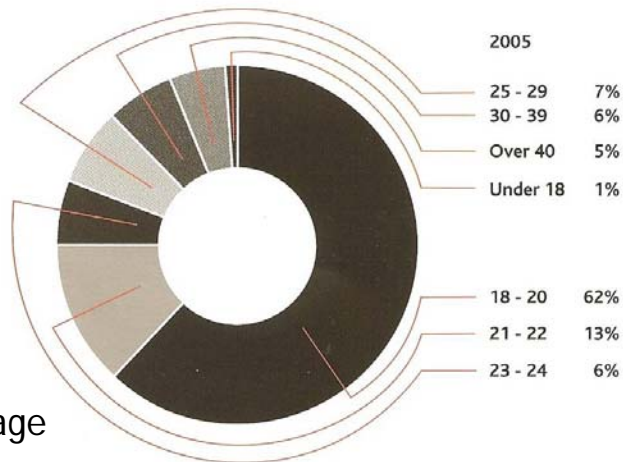
UGs by mode of study



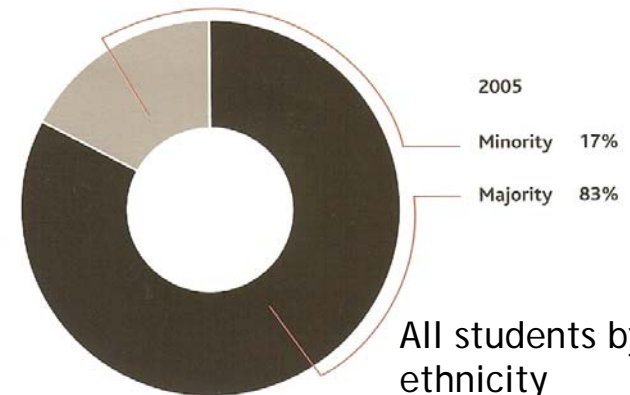
All students by domicile



UGs by age

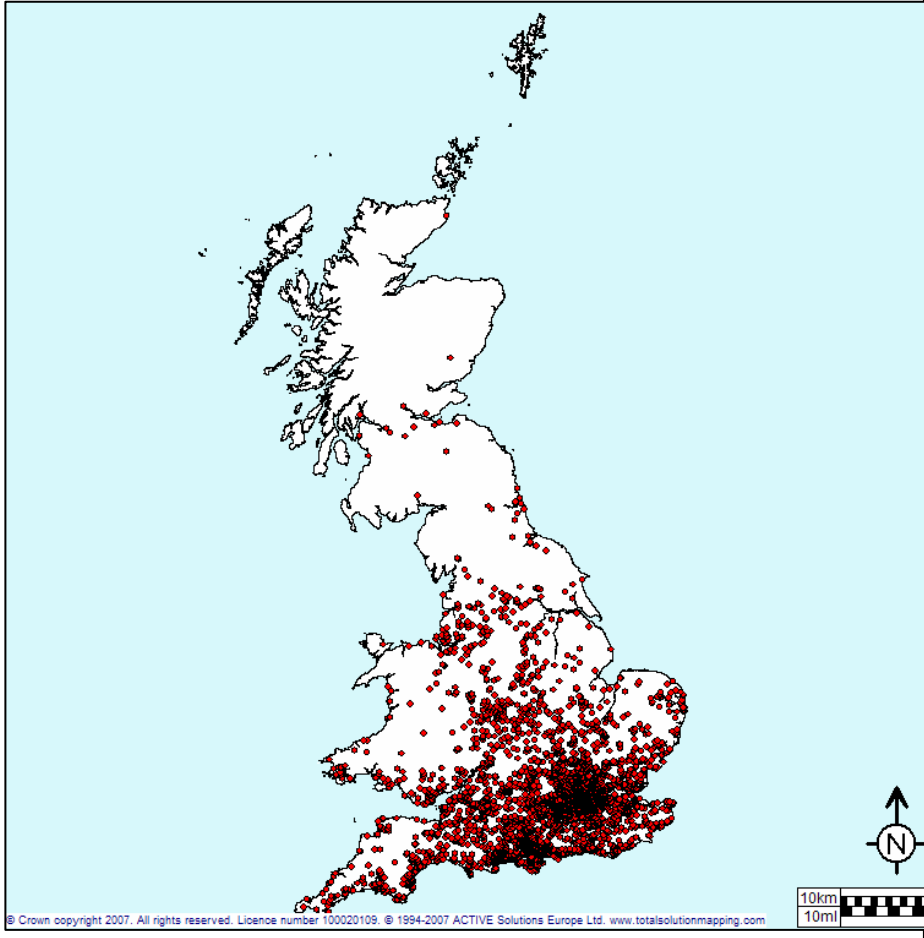


All students by ethnicity

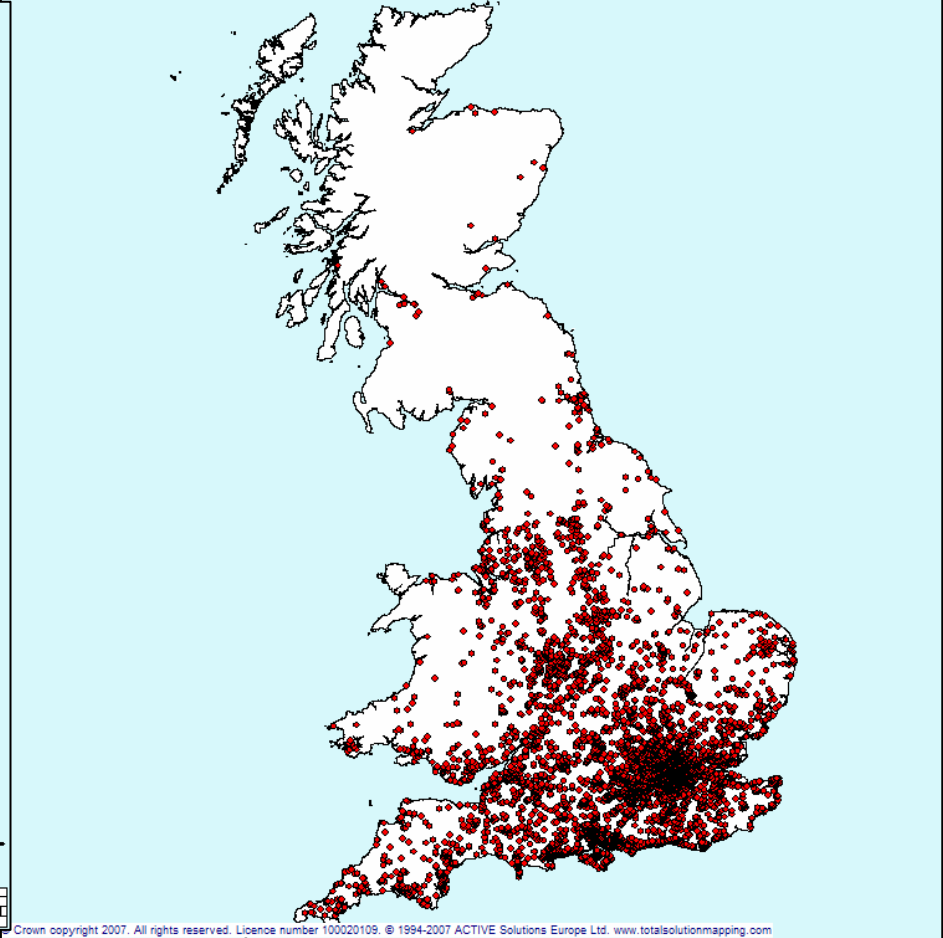




# SSU students 2006



# SSU applicants 2007



# Student Profiling

- Mosaic postcode analysis of current students from student record system.

Mosaic Grouping	Number of students	% of total students
Symbols of Success	2453	33.2 %
Suburban Comfort	1522	20.6 %
Ties of Community	876	11.9 %
Happy Families	750	10.2 %
Grey perspectives	511	6.9 %
Twilight Subsidence	485	6.6 %
Welfare Borderline	302	4.1 %
Blue Collar Enterprise	250	3.4 %
Urban Intelligence	101	1.4 %
Municipal Dependency	76	1 %
Rural Isolation	54	0.7 %
Total	7380	100 %



# A06 High Technologists (Mosaic Group: Symbols of Success)

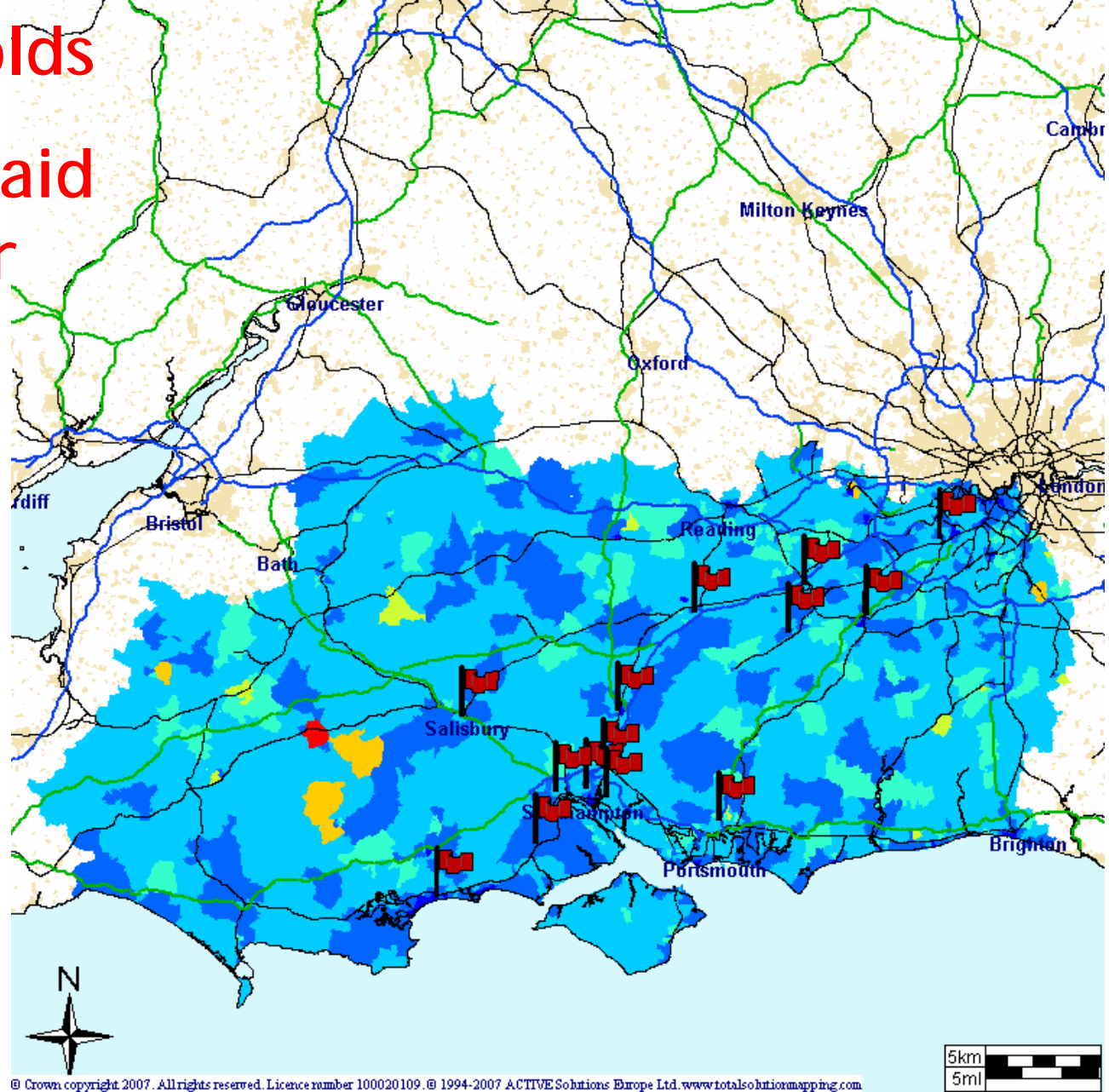
■ This group are found in areas of modern, high specification family housing, mostly in outer metropolitan areas, which attract well paid executives working in large corporations.

■ **Education:** "As with all *Symbols of Success*, *High Technologists* are generally well educated. However, although 28% have a degree, this is the smallest proportion within this mosaic group. Furthermore the proportion that have not attained at least 5 'O' levels is very close to the national norm. To an extent this is reflected in the education progress of their children, in that their levels of performance do not match that of many others within *Symbols of Success*. However, it does appear that most children do well through school life, leaving with good sound qualifications to set them up for a career, or for entry into university."

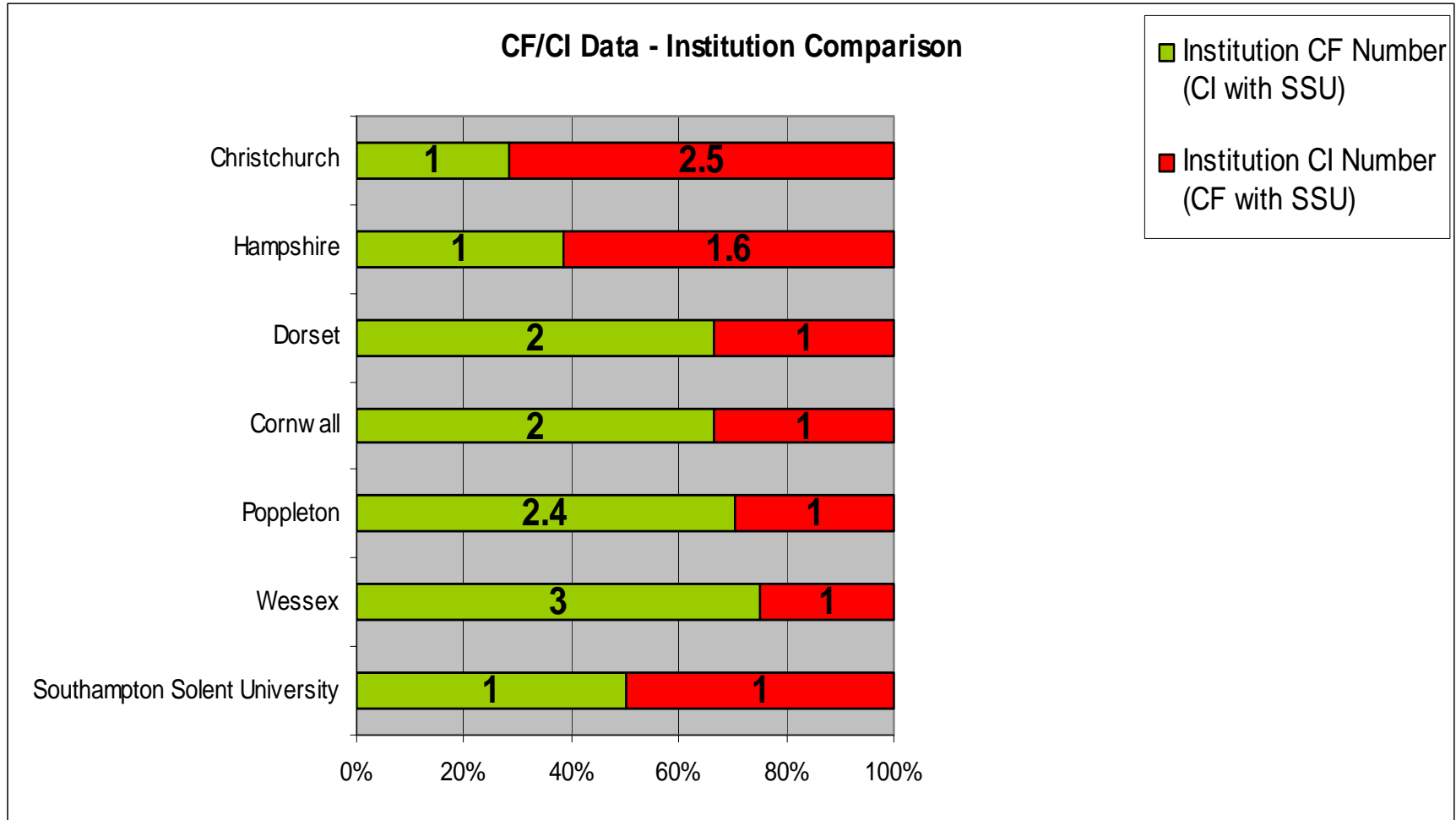
Key Features	Communications
Full nest families	<i>Receptive to:</i>
Well paid executives	Internet
Large corporations	Telephone advice lines
M3/M4 corridor	Broadsheet
Large modern houses	newspapers
Company cars	Magazines
Good diet and health	
Active lifestyle	<i>Unreceptive to:</i>
Internet	Telemarketing
	TV

10 to 14 year olds

Hot spots overlaid  
with top feeder  
colleges



# Them or Us?



# Enrolment trends

SSU enrolment trends against national and benchmark HEI trends by JACS Principal Codes	National	SSU	Aquae Sulis	Dorset	Poppleton	Wessex	Christchurch	East Sussex	Midlands	Clapton	Peterborough	Outer London	Northampton	Thames	Hampshire	Somborne	%	%	%
C Biological Sciences																	67%	20%	13%
F Physical Sciences																	25%	25%	50%
G Mathematical & Computer Sciences																	7%	13%	80%
H Engineering																	25%	17%	57%
J Technologies																	20%	40%	40%
K Architecture, Building & Planning																	45%	27%	27%
L Social Studies																	43%	21%	36%
M Law																	50%	8%	42%
N Business & Administrative Studies																	40%	20%	40%
P Mass Communications & Documentation																	64%	14%	21%
Q Linguistics, Classics																	27%	27%	47%
R European Languages, Literature																	25%	17%	58%
V Historical & Philosophical Studies																	33%	33%	33%
W Creative Arts and Design																	53%	27%	20%
X Education																	69%	1%	15%
	60%	40%	56%	33%	50%	23%	36%	43%	33%	57%	0%	86%	13%	43%	82%	25%			
	20%	20%	22%	33%	21%	31%	36%	29%	13%	7%	8%	7%	20%	14%	23%	38%			
	20%	40%	22%	33%	29%	46%	27%	29%	53%	36%	92%	7%	67%	43%	0%	38%			

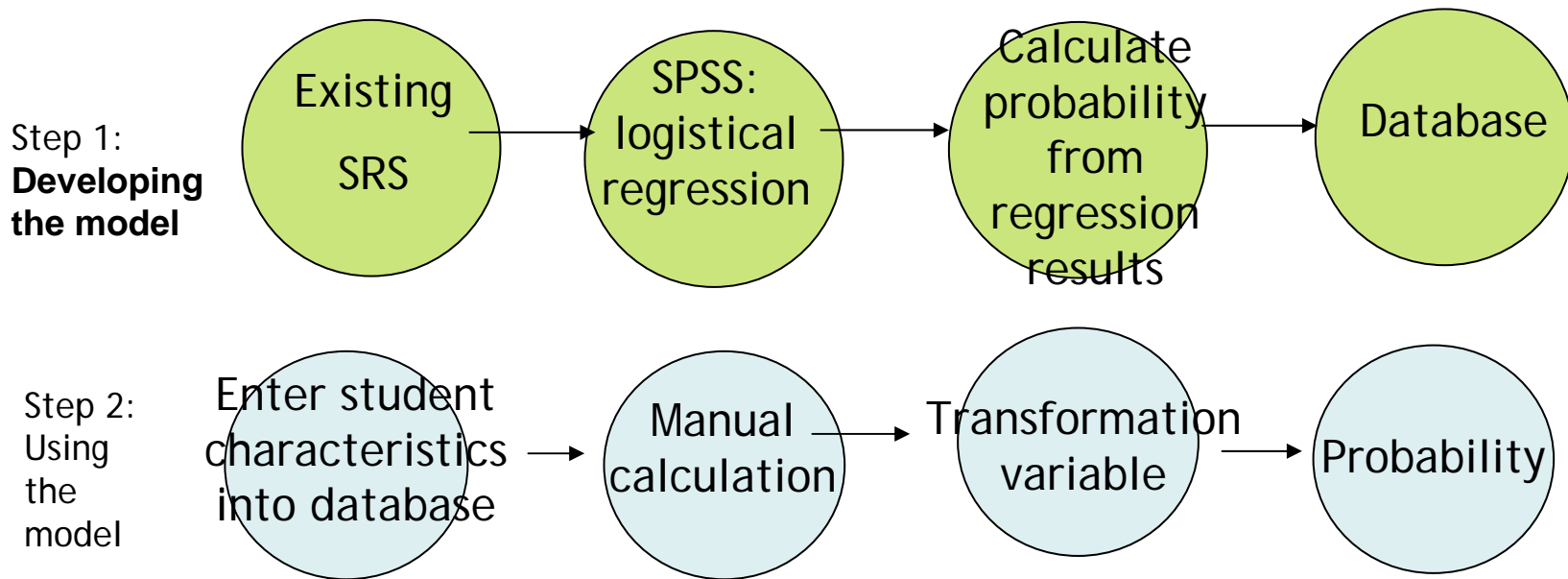
# Future directions 1

- Routine collection of unit feedback
  - Online collection introduced 2006/07
  - Standardised unit feedback questionnaire
  - Implemented online
  - For completion by ALL UG and PGT students
  - Short: only 9 scales and 2 open-ended questions
  - Feeds into APM process
- 
- Value-added:
    - Individual records: grades - student engagement
    - Unit records: Exceptional units and performance



# Future directions 2

- Pricing model: institutional enrolment probability model that aims to predict the individual student's financial 'tipping point' based on a number of variables
- Based on the work done by Siefert and Galloway (2006)
- Calculates the actual amount of award that may positively influence the student's decision



# Risotto? Paella? Or Rice Pudding?

500ml	Senior Management Team
10kg	Student Record System, skinned and filleted
500g	IR team, chopped finely
3 strands	Teaching and Learning strategy
100g	Student Experience Survey
200ml	Unit Evaluation survey stock
1 200g	Oak-smoked National Student Census data

- Prepare the Senior Management Team by softening in butter. Set aside
- Lightly sauté the Student Record System with half the IR team. If the mixture seems dry, add more IR team if needed until the mixture is moist but not too runny.
- Gently fold in the teaching and learning strategy.
- Sprinkle over the Student Experience Survey.
- Pour over Unit Evaluation.
- For more depth, add a splash of National Student Census data.
- Add the rest of the IR team.
- Lastly, add the softened Senior Management Team.
- Bring to a boil and lower to a gentle simmer for 21 days for well done, 14 days for medium and 7 days for rare.
- Season generously and serve with a pinch of salt.

*This is a recipe so versatile that it can be served as hors d'oeuvres or a light supper. For a more substantial meal, marketing intelligence can be added. Or for a meal with a difference, use CRM systems. Bon Appetit!*

# Please direct further discussion & questions to:

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# References

- Saupe, J.L. (1981) *The functions of Institutional research*. Tallahassee: AIR.
- Maassen, P. and Sharma, R. (1986) What is institutional research? [www.aair.org.au/jir/Nov91/Maasen.pdf](http://www.aair.org.au/jir/Nov91/Maasen.pdf) accessed 7 August 2007
- Zhao, C. and Luan, J. (2006) Data mining: going beyond traditional statistics. *New Directions for Institutional Research*. 131, 7-16.
- Siefert, L. and Galloway, F. (2006) A new look at solving the undergraduate yield problem: the importance of estimating individual price sensitivities