Faculty of Science Council

1. What sets York apart from other universities and how is this advantageous?	2. What should be York's academic priorities for the next five years? Please rank your priorities if possible.	3. What are the most pressing challenges facing York now and in the next five years that should be addressed in the next UAP?	4. What are the most compelling opportunities for York now and in the next five years?	5. Do you have any other advice about the University Academic Plan 2015-2020 in terms of its organization and structure, specificity of objectives, indicators of progress and the like?
Speaking only about the programs that I know well, our middling size is advantageous in that it promotes better student-faculty interaction and allows so-so students to do better, whereas they would be left on their own to flounder or struggle in a larger institution. It also removes the competitiveness and sabotage among students that characterizes larger and more prestigious institutions. However, it remains necessary to maintain a healthy research enterprise that supplies the undergraduate program with competent, in-house TAs and provides ample opportunities for undergrads to work at the frontiers in research in a diversity of areas.	(1) To reduce our dependence on part-time teaching. By virtue of the contract with CUPE, instructor autonomy and seniority makes it onerous to ensure academic quality or take remedial measures. I also think that part-time teaching is too precarious to foster quality among candidate instructors. We have a very small pool of competent contract faculty in the GTA and are forced to take a chance with second-tier candidates. (2) Trim programs that are fragile, low-quality, poorly attractive or which require more resources than they are worth. The AAPR should have done this already. Redirect resources to those attractive and high-quality programs that require more resources to remain competitive among GTA institutions. (3) Consolidate the multiplicity of lower-year courses that are very similar in content and are mutual course credit exclusions, especially in service courses. I am thinking, for instance, of the plethora of first-year MATH, EECS, SOSC, NATS and HUMA courses (among those that I know about) that artificially boost the apparent teaching needs of programs. (4) Impose entrance testing for proper streaming according to preparation. This is already done for some language courses.	(1) The increasing desire among incoming students to get a well paying job, instead of an education, ethical grounding and professionalism. (2) The dumbingdown of academic expectations in response to the changing nature of high-school experiences. (3) The decreasing rigour of too many courses, coupled with an increase in academic dishonesty. Over my 30 years here, I have heard too many anecdotes of students cheating, which are largely a response to (1).	See # 3; challenges are really opportunities.	While it is all fine to identify strengths, weaknesses, opportunities and threats, the Academic Plans that I have seen have used such vague language in its objectives as to be pretty much useless, with such pie-in-the-sky objectives as internationalization and research intensification without any new resources. What is really needed is not so much an Academic Plan as an Academic Plan of Action, listing fully costed specific measures with their own milestones that Senate will enact.

York is a university with small representation of scientists and engineers. We do not have enough faculty to teach enough courses at both undergraduate and (especially) graduate levels to have comprehensive programs. This is a disadvantage as it is difficult to develop strong academic programs in these areas. I see nothing that sets York apart and also advantageous.	Development of strong science/engineering academic programs in the following areas: 1) Biomedical 2) Quality of environment 3) Alternative energy Teaching in these areas will eventually improve the quality of life and health of Canadians	Out of date courses and labs. There should be a regular review of quality of every course and lab taught. Performance of faculty members should be evaluated on an annual basis and compensation should be dependent on performance.	
Its quality and achievements are the biggest secret in the Province. This is hardly advantageous.	Improving the reputation of York. This applies to teaching, research and outreach and equally to a wide target of influencers such as parents, professionals and decision makers. York has done a lot since its inception to move towards being a comprehensive University, and must continue to do so. We cannot regress to being a University defined by a small range of disciplines no matter how good the programs in them may be. Questions from the public such as "Does York have Engineering?", "Does York have Fine Arts?","Does York have Science?", "Does York have Health?" must be consigned to the trash heap of history.	How to improve our reputation in the currrent fiscal climate. To support the necessary teaching development and the increased research activity in this environment will be challenging.	The students and alumni are engaged and visionary. They should be part of the development of the plan for the future.

For York? I don't know. I can comment on Faculty and Department identities and comparative advantages and distinctions, and highly favourably (friendly, small, welcoming, underrated), but not at the University level.

York's got a problem when its best-known distinctive faculties (Lassonde, Schulich, Osgoode) all intentionally cultivate a separate identity and name, and tend to omit York's name in their advertising.

Ironically I think York should cut back on the top-down branding exercises and overthe-top marketing efforts and cultivate itself as a more decentralized group of institutions (bottom-up). Let complainers like me step up and work on York's overall reputational problem in our own individual ways. There is a huge amount of talent and idealism at the departmental levels.

Just one comes to mind: where incoming undergrads rank their preferred Ontario universities to attend, our goal (either at a Faculty or University level) should be to move up one (a single) place on the charts. I don't know what the current standings are but that's a discrete and hopefully attainable goal. If taken too seriously such a goal can lead to madness - see the problems at US universities regarding the *US News and World Report* rankings - but as a short-term pragmatic measure I think it would be quite useful.

Is it so bad if York becomes a teaching-centred university as the Ontario gov't moves to differentiate universities? If so, why? I think this assumption needs to be actually articulated.

Regarding progress indicators:

The tendency of all administrators is to follow Kelvin's advice: "When you can measure what you are speaking about and express it in numbers, you know something about it, but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre, unsatisfactory kind." -William Thomson (Lord Kelvin). Today this sentiment is rephrased in an apocryphal comment by Peter Drucker (which I have never actually found the source): "That which gets measured, gets done."

And to a certain extent this has to be true - how else would one know whether a new policy was working?

But consider the following rejoinder too, from an MIT experimental physicist:
"I thought that an

1	I I	1	appropriate counter
			to Lord Kelvin would
			be a famous quote
			from Daniel
			Yankelovich. The
			first time I saw it, I
			was so delighted
			with it I copied it
			out'The first step
			is to measure
			whatever can be
			easily measured.
			This is OK as far as
			it goes. The second
			step is to disregard
			that which can't be
			measured or give it
			an arbitrary
			quantitative value.
			This is artificial and
			misleading. The
			third step is to presume that which
			can't be measured
			easily isn't very
			important. This is
			blindness. The
			fourth step is to say
			that which can't be
			easily measured
			doesn't really exist.
			This is suicide.'" -J.
			R. Zachiarias, in
			Jack Goldstein, A
			different sort of
			time: the life of
			Jerrold R.
			Zacharias, Scientist,
			Engineer, Educator
			(MIT, 1992), p. 287

It has access to what was called the 905-area belt, serving new immigrants, predominantly from Brampton, Maple, across towards Oshawa. York's reputation in the core GTA is not favourable compared to UT, and Ryerson. The latter has made inroads into our traditional student base from the GTA.	To serve the students from these immigrant families the focus should be on: engineering and sciences, and business-related education.	to move away from some of the traditional liberal-arts areas, so that engineering, physical and life sciences, mathematics, computational science and the business school will become more prominent.	York is perceived as doing poorly in student services, The Registrar's Office is a complete disaster. Room allocations is a nightmare (they keep changing things around from year to year, usually for the worse, students have unreasonable walking distances between classes). The exam schedule is often primitive: example: three midterm exams for our 3rd year class are on three subsequent days early in the schedule. When requested by our UPD to change at least one of them, the answer is 'cannot be done'. Incompetence and arrogance is what also rules UIT. With such poor services the students suffer, get angry, and tell their peers to stay away.
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York is a big, and young, University. We are not hampered (or should not be) by the weight of tradition and conventional thinking. We can dare to do things differently, and do them on a big scale.	1. Science. For its size, York has a very small Science component. There are exciting fields of science where York could take a lead, including interdisciplinary subjects, for example: brain chemistry and artificial intelligence (chemistry/biology/computer science/psychology); nanotechnology and engineering at the nano scale (physics/chemistry/engineering and broadly speaking, materials science); "green" technologies (renewable sources of energy, environmental science, green chemistry). 2. A School of Medecine. That would be transformative, on so many levels.	We are too slow to act, too bureaucratic, too conservative, and too concerned with pleasing everyone. It is hard for any big organization to be nimble and act quickly and decisively on priorities. But we must strive for that. A problem I see is the all too often adversarial relation between YUFA and the administration. The two groups should work more often together, and not only near collective agreement renewal. We need to build trust, so that people in positions to make decisions do not have to "consult widely" and build consensus each and every time a special opportunity comes up. Communication is important. As a simple practical measure, we could reduce the size of committees and eliminate redundant committees. For example: do we really need Faculty tenure and promotion	No.
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Location	try to lessens the amount of sexual assaults	The problem with useless committees is that people do not easily admit that *their committee* is useless: we are programmed to "work hard" at whatever task we are given. So, people on useless committees will do something, even though that is counterproductive 98% of the time. We just need to eliminate such committees.	
		numbers up	N/A

- As long as I've been a faculty member at York University, some 30 years now, Presidents, Boards of Governors, Senate document after Senate document, etc., have referred to York's uniquenesses. These usually revolve around certain commitments; to social justice, equity, diversity, tolerance, community engagement, interdisciplinarity, etc. The truth is, all top-notch universities in Ontario have all of these and more. Βv
- "more," I refer, in part, to an established reputation for research and teaching excellence. One might refer to this loosely as institutional gravitas.

To be sure, York University and the Faculty of Science, has islands of research and teaching excellence, but we need more excellence in each of these areas to secure "reputation" among parents, teachers and students. It will take a great deal of time and effort to become a first-tier institution broadly speaking, but there's no time like the present to begin the journey.

- It is important and essential that York remain a leader in diversity, social justice, equity, community engagement, etc. But these alone will never launch us into the first tier. To strive for excellence, York University must make a firm commitment to improve perceptibly the quality of its teaching and research. Nothing more, but nothing less. speaking with colleagues at other Ontario universities (and beyond), and in being aware of some of the pedagogical initiatives being undertaken there (particularly in Science), it is apparent to me that York University has considerable ground to make up if it is to be routinely considered a first- or second-choice by top high school students. Without an established reputation as a research institution, York must excel in curricular design and delivery using the best evidence-based methodologies if it is to be a serious cohntender for the attention of prospective undergraduates going forward. York must be a recognized leader in teaching if it is to reach the next plateau. This requires both a collective will and the deployment of appropriate resources. This should be the UAP's first priority. We also need to enhance student support such as identifying at-risk students early on in the first year and to provide "curricular reinforcement" where necessary to decrease attrition rates and to enhance student perceptions.
- Building up the quality of teaching in all units/Faculties.
- Exploiting the advantages provided by subway access and identifying and fostering closer partnership with the emerging "905" region.
- Launching the Markham campus and ensuring a smooth integration with the Keele campus
- Attracting higher-quality undergraduate and graduate students, and postdocs (where appropriate).
- Unless we move forward with all these, we'll lose ground to the other major universities in southern Ontario.
 The status quo is not an option.

No doubt, person centuries of time will be expended in this exercise to identify the objectives and to flesh out how these might be achieved and assessed, etc. But the strategy is really simple: this institution needs more gravitas, period. We can achieve this through significantly enhancing out teaching in the near and intermediate terms (which would not necessarily require significantly more resources), and our research in the intermediate and longer terms. It would be a good sign internally and externally if we were to make the enhancement of teaching the first priority in the next five years, with the support and nurturing of research a close second. Clearly, we will need to advertise York's new (renewed?) commitment to teaching if we're to benefit in the short term.

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- A complementary goal must be to enhance the student experience and therefore York's attractiveness. Not through gimmicks and sleight of hand. We must ramp up the quality and quantity of experiential opportunities for our students. At this point, we are significantly behind most first-tier universities on this front and nearly every good student with whom I've chatted has indicated that these opportunities are critical for today's student.
- The other major priority is to enhance research at York. What does this really mean? Most deans seem to be of the opinion that faculty members hired in the last decade in their Faculties are top-notch researchers on paper. York must find a way of supporting these researchers and their teams by providing appropriate resources where necessary and to "get out of their way" where necessary. By the latter. I mean remove impediments to research that

	some first- rate researchers complain about at York University. Finally, we must collectively learn to celebrate research at York as among the highest institutional goods.				