Attaining global leadership in education – "IITK Vision 2020"

Vision 2020 discussion document
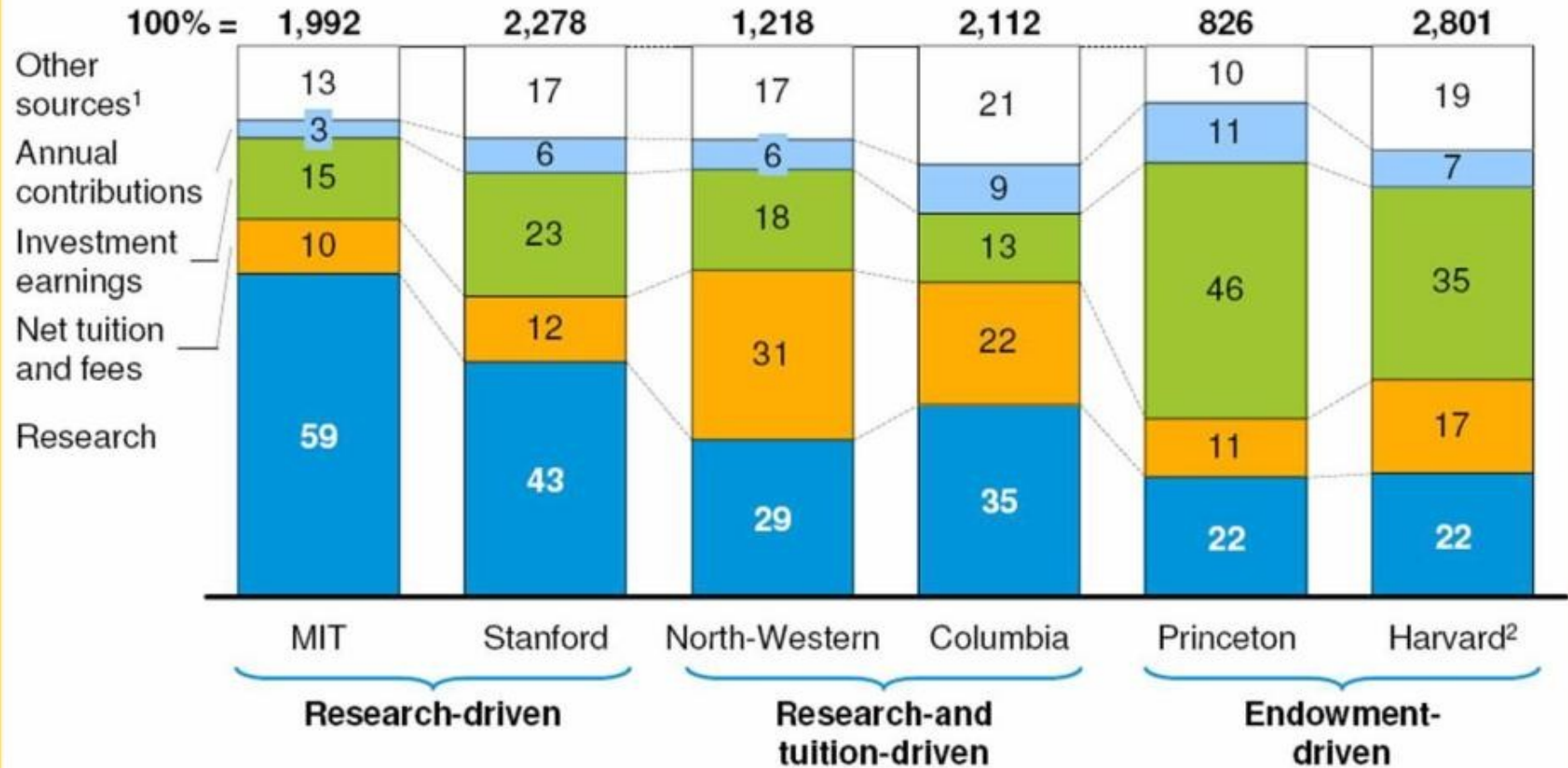
IIT K vision – Achieve 'global leadership in science and technology' through emphasis on 'research excellence' while maintaining 'teaching excellence'

Phase 3

Global leadership in science & technology and Asian leadership in select disciplines

Phase 2

Global leadership in science and technology

Phase 1

Asian leadership in science and technology

Today – National leader in science and technology

2010-2020

- To be seen as an **Asian leader in the areas of science and technology including adjacent fields** (e.g., biotechnology, environment)

- Selectively **build presence in 1-2 non related fields** (e.g., liberal arts, business)

2020-2030

- To be seen as **a global leader** in the **area of science and technology**

- Consolidate presence in select non related fields (e.g., liberal arts, business)

- Revisit and explore new areas to pursue

Beyond 2030

- Reinforce **global leadership in science and technology** through continued research excellence

- Acquire **Asian** leadership in 1-2 non related fields

- Continue to consolidate presence in new non related fields

Proactively participate in transforming Indian economy and creating societal impact

④ Prominent universities are diversifying sources of funding

Diversification of funding[1]

Operating revenue[3], percent

	MIT	Stanford	North-Western	Columbia	Princeton	Harvard[2]
100% =	1,992	2,278	1,218	2,112	826	2,801
Other sources[1]	13	17	17	21	10	19
Annual contributions	3	6	6	9	11	7
Investment earnings	15	23	18	13	46	35
Net tuition and fees	10	12	31	22	11	17
Research	59	43	29	35	22	22

Research-driven: MIT, Stanford
Research-and tuition-driven: North-Western, Columbia
Endowment-driven: Princeton, Harvard

1 The revenue data is taken over 2003-2007
2 Excluding medical income
3 Some universities such as Harvard count individuals' foundations as foundations, others count them as individuals

SOURCE: ID# 720450 Developing long-term options in higher education; university Web site; team analysis

Today, IIT Kanpur is seen as one of the leading schools in Asia; however, it lags behind on global rankings

University ranking; 2009

Institution		Location	Global		Asian
			THES[1]	SJTU[2]	QS Rankings[3]
	MIT	USA	9	5	N.A.
	Stanford University	U.S.A	16	2	N.A.
	University of California	U.S.A	39	3	N.A.
NUS	National University of Singapore	Singapore	200+	200	10
清華大学	Tsinghua University	China	49	201-302	10
	IIT Kanpur	**India**	**200+**	**500+**	**34**
	IIT Bombay	India	163	500+	30
	IIT Kharagpur	India	200+	402-501	141

The IIT set consists of both a metro and a stand-alone IIT

1 Times Higher Education Society rankings
2 Shanghai Jiao Tong University academic ranking of world universities
3 Quacquarelli Symonds ranking

SOURCE: University websites; team analysis; THES report 2009; SJTU ARWU 2009; QS ranking (Asia) 2009

IIT Kanpur compares well with leading schools on the 'people' and 'teaching effectiveness' dimensions

■ IIT Kanpur

	Students 2006-2009			Faculty 2006-2009		
Institution	Strength Numbers	Undergraduate students Percent	Admission selectiveness[2] Percent	Student to faculty ratio Percent	International faculty Percent	Chairs by faculty[1] Percent
MIT	10,299	40	12	10	7	
Stanford University	19,782	33	10	8	5	
University of California	33,910	75	41	14	30	15-20
National University of Singapore	31,492	77	N.A.	15	62	
Tsinghua University	27,822	53	8	5	14	
IIT Kanpur	4100	56	2	12	~0	~14
IIT Bombay	5,507	58	2	12	~0	<2
IIT Kharagpur	5,350	52	2	12	~0	<2

IITK has highest number of chairs of all IITs

Amongst the best in the world

1 Chairs by faculty represents the total number of chairs constituted per faculty member in %
2 Admission selectiveness represents the total number of successful candidates upon the total number of applicants for the undergraduate programs

SOURCE: Annual report of universities; university website

However, IIT Kanpur needs to improve its 'research effectiveness' to match global standards

■ IIT Kanpur

| Institution | Doctoral program[1] | | Research output[1] | | Research spend[2] |
	Ph.Ds awarded Number	Ph.D to faculty ratio Number	Patents granted Number	Publications per faculty Number	Research grant per faculty USD thousands
MIT	3,521	3.5	102	10	685
Stanford University	3,365	2.8	64	13	540
University of California	NA	NA	275	11	345
National University of Singapore	538	0.3	25	2	170
Tsinghua University	5,316	<1	56	8	NA
IIT Kanpur	105	0.4	7	1	27
IIT Bombay	200	0.4	6	1	25
IIT Kharagpur	228	0.5	5	1	NA

1 For the period 2006-2009
2 Research spend is the latest available data

SOURCE: Annual report of Universities; University website

IIT Kanpur today is heavily reliant on government funding

| Sponsored research | Alumni contribution |
| Government funding | Others |

Share of funding; percent

MIT, 2009
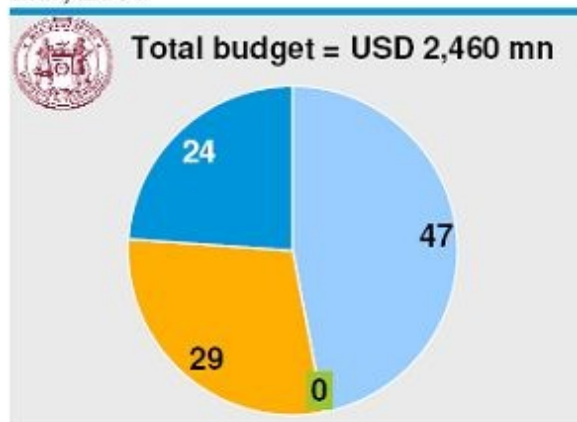
Total budget = USD 2,460 mn

- 24
- 47
- 0
- 29

Stanford[2], 2009

Total budget = USD 3,500 mn

- 27
- 30
- 0
- 43

University of California, 2009

Total budget = USD 2,000 mn

- 8
- 38
- 34
- 21

NUS[1], 2009

Total budget = USD 1,150 mn

- 7
- 35
- 58

IIT Bombay[1], 2004

Total budget = USD 22 mn

- 12
- 18
- 70

IIT Kanpur, 2009

Total budget = USD 45 mn

- 3
- 8
- 13
- 78
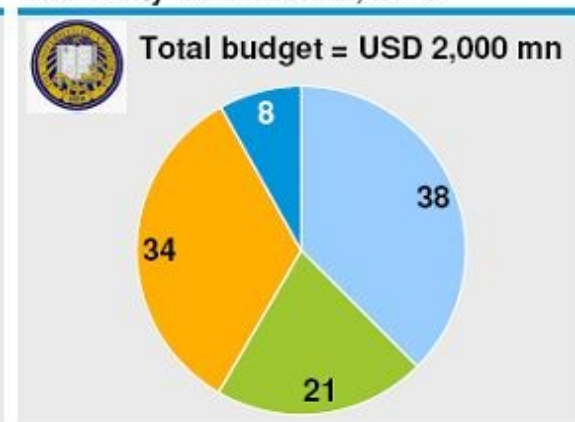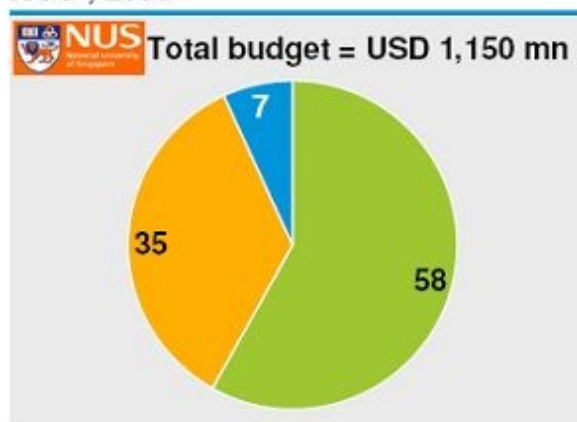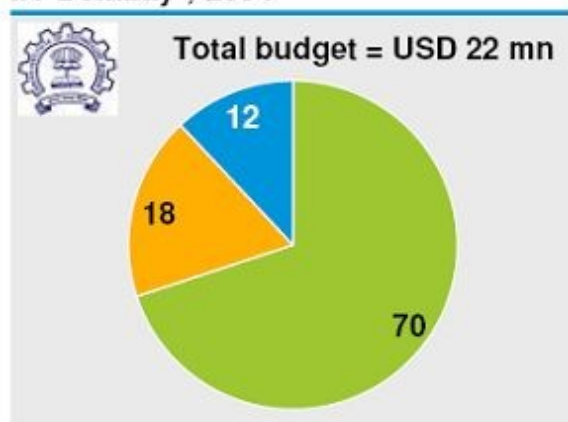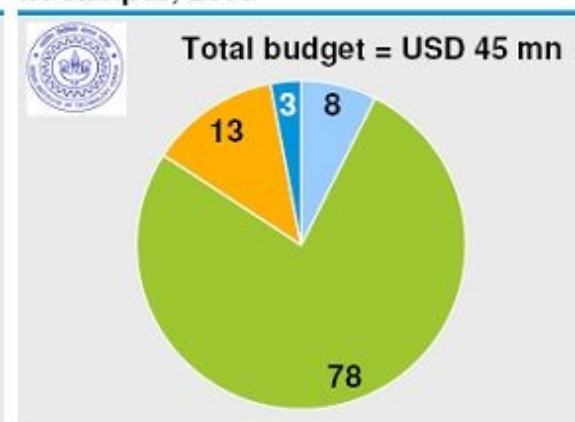
1 For NUS and IIT Bombay, sponsored research generated revenue data has been clubbed with others as the break up is not available
2 Alumni contribution includes other endowments for Stanford university

SOURCE: Annual report of universities; web/press search

IIT Kanpur is strongly positioned across multiple dimensions

1	Global reputation of the IIT brand	• IIT's academic programme is considered amongst the best in the world • IITK has successfully built an ecosystem which continues to attract some of the sharpest and the brightest minds in India – More than 3,00,000 aspirants sit for Joint Entrance Exam (JEE) of which ~5,000 are selected every year
2	Superior research capabilities in select fields	• IIT K's wind tunnel is the largest across all educational institutes in India • IITK has its own device fabrication lab • Total lab infrastructure spend ~Rs.40 crores per annum ~367 sponsored projects, 30 patents filed during 2008-09 • State of the art laboratories/centres, such as, 4-i laboratory, Centre for internet security, National information centre for earthquake engineering • IITK faculty has won international accolades for top-quality research

IIT Kanpur is strongly positioned across multiple dimensions

3 — Emphasis on socioeconomic initiatives

- **Strong commitment towards socio economic projects**
  - River water cleaning (e.g., **Ganga river project**)
  - Social entrepreneurship (e.g., low cost education tool **'Akansha'** piloted in rural areas by Ministry of Human Resources and Development)
  - Agropedia project to develop an agricultural encyclopaedia
  - Indian history (e.g., decoding mystery of the iron pillar)
  - **TMRS** projects focused on enhancing railway security

- **Space research**
  - Mobility module for the Indian rover (Chandrayaan II)
  - A UG research initiative to build a nano-satellite at IITK

4 — Strong and supportive alumni

- IITK alumni **(25,000+)** have performed exceedingly well in both industry and research

- IITK foundation alone has raised over **USD 5 million** since its inception in 2000

- Acted as the catalyst for
  - Seeding the **PanIIT movement** and multiple alumni chapters world wide
  - Supporting **IITK-Caltech student exchange** program
  - Setting up **~50 faculty chairs,** establishing numerous scholarships,
  - Providing funds to attend international conferences
  - Seeding the IITK 2020 Vision effort

However, seven structural challenges need to be addressed

"We are unable to attract high quality faculty, staff, and graduate students"

"Our diversity has reduced drastically with time"

"Our greater focus has been dissemination and not creation ..."

"The number of patents granted is ~10% of a top 20 university"

1 Weakening people[1] proposition

2 Locational disadvantage

"There is only one direct flight connecting Kanpur to the world..."

"Kanpur is rated 85th in the index of Indian cities to live in"

7 Research level below aspirations

"We are just scratching the surface..."

"...can alumni can act as pressure groups?"

6 Under-utilised alumni linkages

3 Limited ability to meet expense needs

"The proposal for a new workshop was turned down.."

"~75% of our funding is directly from the government – constraints our operational flexibility"

"How can you expect the faculty to spend time on hostel management – I spend only 10% of my time on research"

"Purchase of equipments take 3-4 months.."

5 Inefficient governance processes

4 Inadequate infrastructure

"We are operating at four times the operating capacity for some labs"

"Our departmental labs urgently need an upgrade"

Rethink strategy on residential campus

1 Applicable for Faculty, Students and Staff

SOURCE: McKinsey expert interviews; IITK Dean interview; IITK 2008-09 annual report; IITK website

Design choices to frame the vision and strategic posture for IIT Kanpur

5 central design choices for IIT Kanpur

Institute's posture standing, and ambition level	Primary basis for distinctiveness and reputation	Stance towards India's economic/ business growth story	Stance towards societal impact	Posture towards funding and self sufficiency
Focus/ breadth Many ↑ One National generalist — Global generalist National specialist — Global specialist National — Global **Ambition level**	Learning effectiveness **VS** Research effectiveness	Shaping/ proactive role **VS** Participatory/ reactive role	Central role **VS** Peripheral role	Government dependent **VS** Endowment driven **VS** Research driven

There is agreement among faculty, alumni and students on proposed vision - "To be recognised as a global leader in science and technology"

	Faculty	Alumni	Grad students
To be recognised as a global leader in science and technology	31%	41%	38%
To be recognised as a top 20 educational institute in the world	29%	29%	27%
To offer the best academic program in the world	6%	0%	15%
To be known as a multidisciplinary institution	6%	6%	8%
Others	28%	24%	12%

"International comparison is irrelevant, IITK should respond to the problems of our country."
– Faculty

"IITK should aim for excellence in both research and education, somewhat like MIT"
– Alumnus

"IITK should be a place where true research can be done"
– Grad student

In order to realise its vision, IIT K should launch initiatives across six transformational themes

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

Teaching/learning effectiveness

To proactively invest in building alumni linkages and increase support to 20x by 2020

6

Alumni collaboration

Strengthen research in science and technology as the primary basis for IITK's distinctiveness and reputation

2

Research effectiveness

Achieve "global leadership in science and technology" by 2020 through emphasis on "research excellence"

Funding

5

To be self reliant in funding by broadening the funding mix; increase it to 6x by 2020

Indian economy societal impact

3

Catalyse transformation of select sectors of Indian economy by broadening/deepening participation; thereby making tangible societal impact

Governance

4

To transform the governance to ensure quick decision making

Transformation themes for IIT Kanpur – "Teaching/learning effectiveness"

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

To proactively invest in building alumni linkages and increase support to 20x by 2020

6 Alumni collaboration

Teaching/learning effectiveness

Research effectiveness

2 Strengthen research in science and technology as the primary basis for IITK's distinctiveness and reputation

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IIT Kanpur should aspire to have ~10000 students and ~1000 faculty members by 2030

Students
Total number of students across disciplines

- 4,100 — 2010
- 5500-6000 — 2015
- 7000-8000 — 2020
- 10,000-12000 — 2030

~3 x
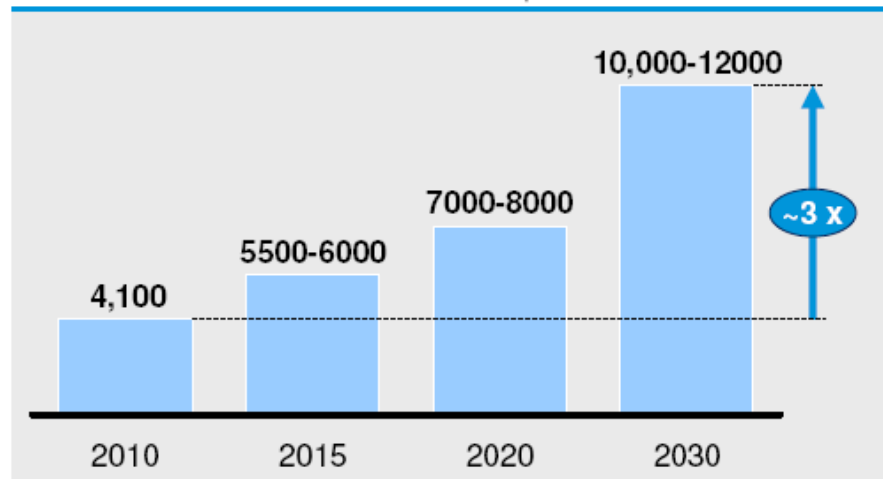
Faculty strength
Total number of faculty across disciplines

- 344 — 2010
- 500-550 — 2015
- 700-750 — 2020
- 900-1000 — 2030

~3 x
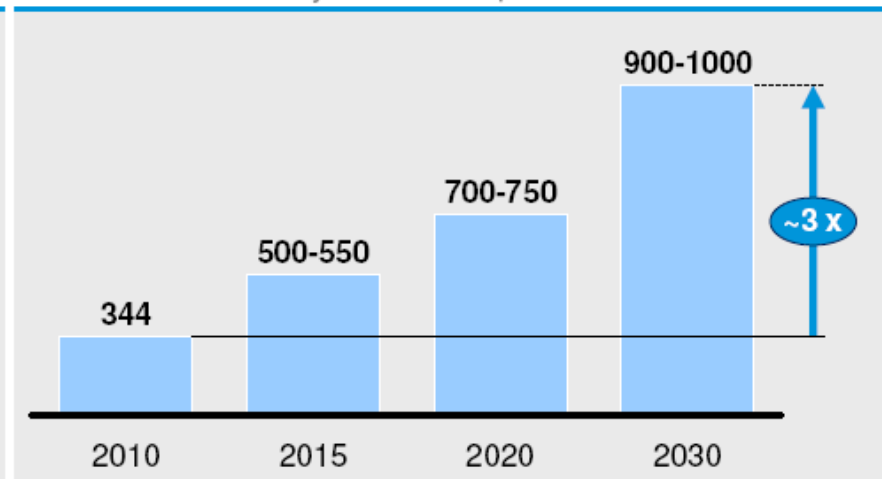
Number of graduate students
Total number of graduate students

Graduate students to represent 50%+ of the student strength

- 1,800 — 2010
- 2500-2600 — 2015
- 3500-4000 — 2020
- 5000-6000 — 2030

~3 x
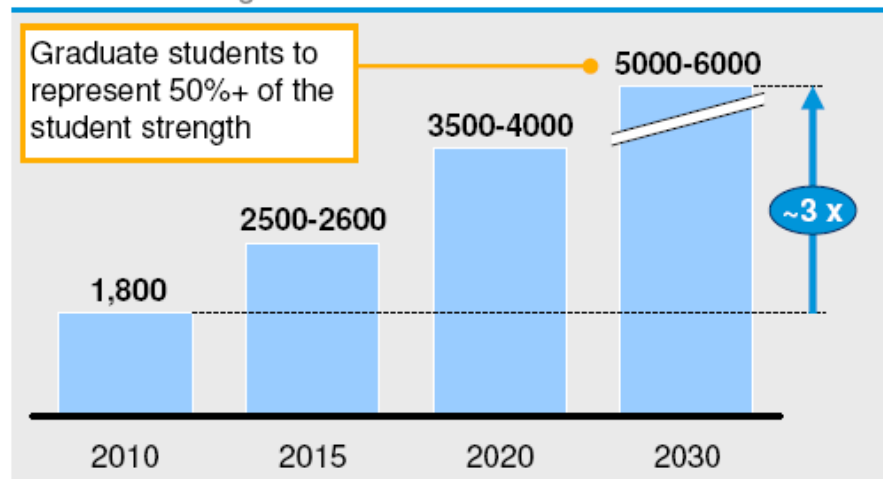
Ph.D awarded
Total number of Ph.D awarded per annum

Number of PhDs per faculty to be ~1.2:1 by 2030

- 105 — 2010
- 300-400 — 2015
- 700-800 — 2020
- ~1200 — 2030

~15 x
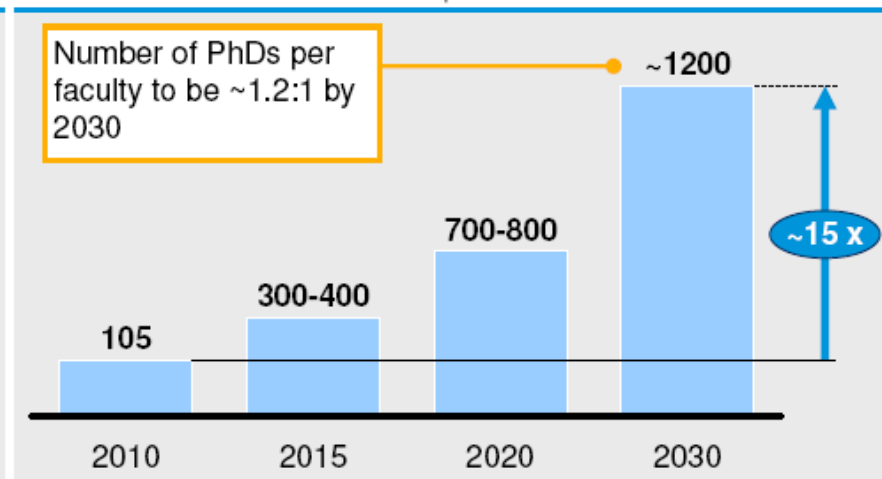
1. Teaching/learning effectiveness

We recommend a set of 10 initiatives for IIT K to sustain its leadership on teaching and learning effectiveness

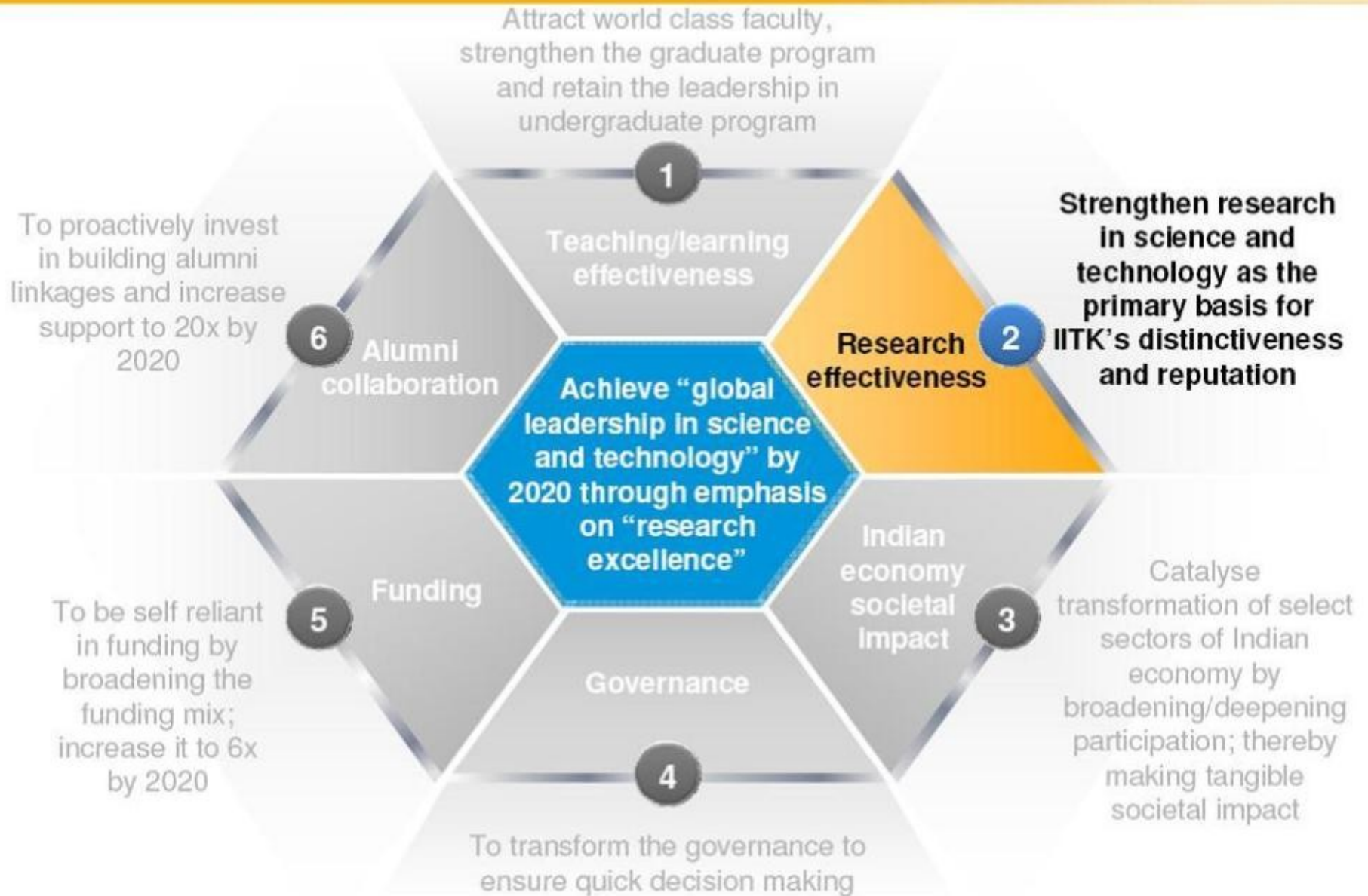|		
A	Attract and retain best in class faculty	1. Ensure a faculty value proposition which is competitive with global standards (includes compensation, fellowships, greater freedom, dual appointment across universities, 2 body program for spouses etc) 2. Introduce differential compensation and strengthen the performance management model 3. Explore hiring from new sources of talent (e.g., PhDs from industry, part-time model) 4. Create job options for spouse within and outside campus; invest significantly in improving the social infrastructure (e.g., schools, restaurants, recreation clubs etc.)

B	Strengthen the graduate/ PhD program	5. Broaden selection process for the graduate/PhD program
		  – Attract foreign students (e.g. south-east Asia) and simplify admission processes
		  – Collaborate with industry for targeted PhD programs, publicize industry sponsored projects to attract students
		6. Enhance the overall value proposition for prospective students through
		  – Research focus, diversity, stipends, scholarships, infrastructure, exchange programs
		  – Creation of joint degree options with prestigious universities
		
		7. Adequate post doctoral support (e.g., exit options, recruitment)

C	Continue to improve teaching pedagogy	8. Upgrade the infrastructure to keep pace with the increase in student strength 9. Update curriculum with emphasis on soft skills 10. Invest in continuing to build on student exchange programs

Transformation themes for IIT Kanpur – "Research Effectiveness"

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

Teaching/learning effectiveness

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To proactively invest in building alumni linkages and increase support to 20x by 2020

6

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2

Research effectiveness

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Indian economy societal impact

Funding

To be self reliant in funding by broadening the funding mix; increase it to 6x by 2020

5

3

Catalyse transformation of select sectors of Indian economy by broadening/deepening participation; thereby making tangible societal impact

Governance

4

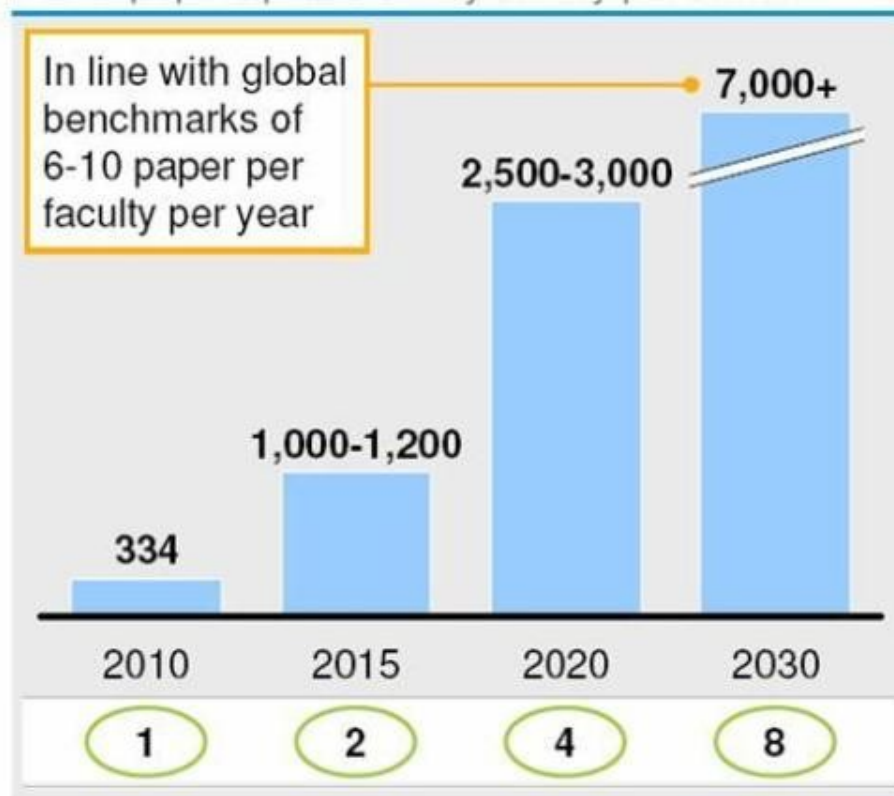To transform the governance to ensure quick decision making

Achieving world class 'research excellence' would require IIT K to achieve a step change in current research output

⬭ xx Per faculty

Research publications
No. of papers published by faculty per annum

In line with global benchmarks of 6-10 paper per faculty per year

7,000+

2,500-3,000

1,000-1,200

334

2010	2015	2020	2030
① 1	② 2	④ 4	⑧ 8

Patents
No. of patents granted per annum

In line with global benchmarks of ~0.1 patent per faculty per year

100+

40-50

20-25

7

2010	2015	2020	2030
⑇ 0.02	⑇ 0.04	⑇ 0.06	⑇ 0.1
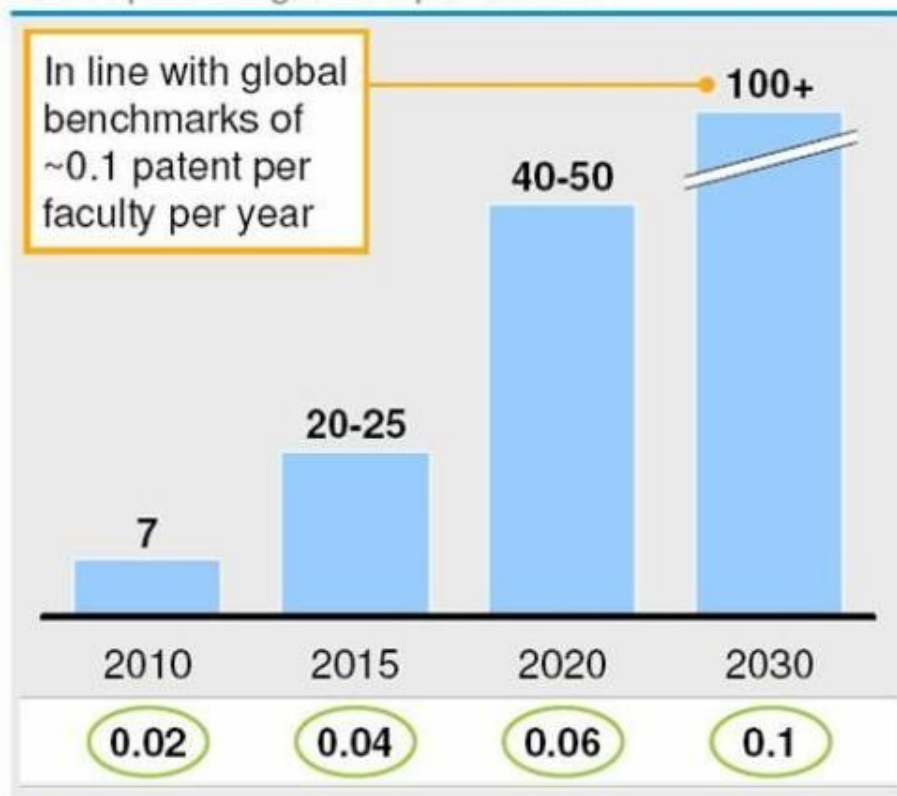
Research output per faculty would need to double over next five years

Track the quality of publications by benchmarking against number of citations received

Institution	Average papers[1] per faculty member[2] Number per year	Average citations per paper[3] Number
Whitehead Inst.	22	55
UC San Francisco	15	17
Stanford	13	17
Sloan-Kettering	13	18
Karolinska Inst.	13	13
Rockefeller Univ.	11	31
UC Berkeley	11	18
MIT	10	21
Scripps Res. Inst.	9	21
Harvard	9	21
CalTech	8	24
Salk Inst.	7	30
ETH (Zurich)	6	14
CSHL	5	45
FMI (Basel)	4	36
EPFL (Lausanne)	3	12
Woods Hole	3	14

Average: ~9   Average: ~24

1 Articles included in the e-SCI Thompson index only (excludes arts, humanities, and social sciences) and affiliated with each institution in the 2006-9 period
2 Only ladder faculty counted (tenured and tenure track), as non-ladder faculty tend not to direct research laboratories
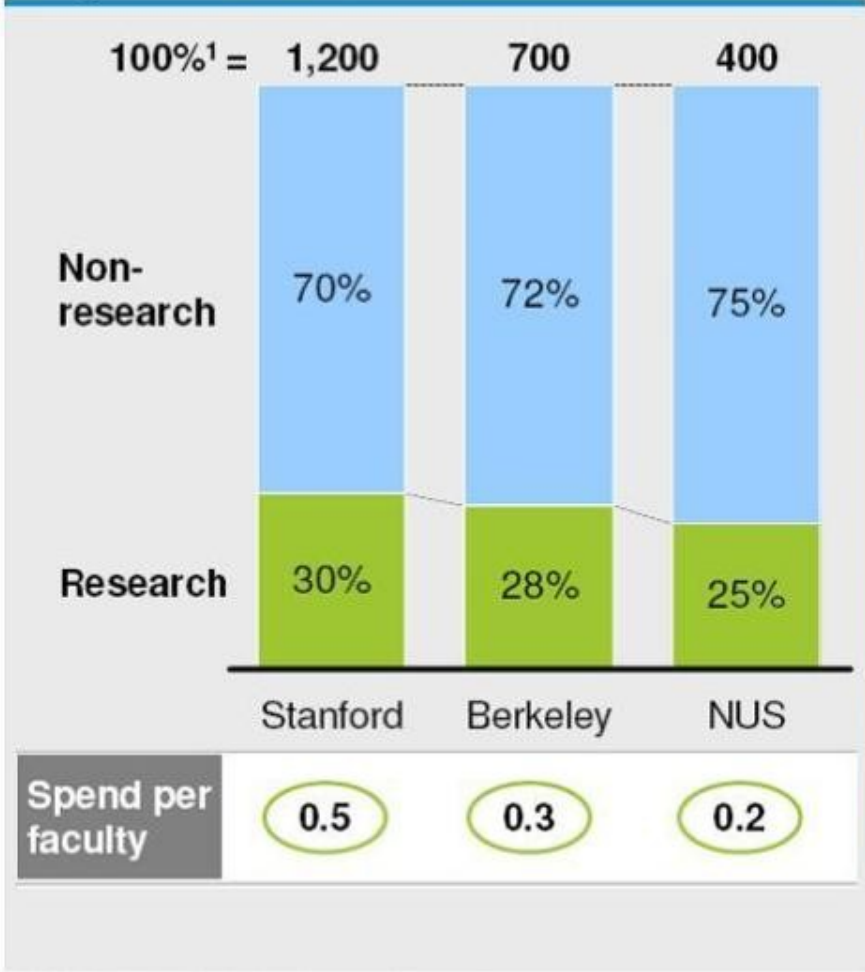3 Citations received from 2006 to 2009 by the papers published in the 2006-9 period

SOURCE: Thompson Web of Science, team analysis

In line with leading research led institutions, IIT K would need to devote as much as 25%+ of its total budget towards research
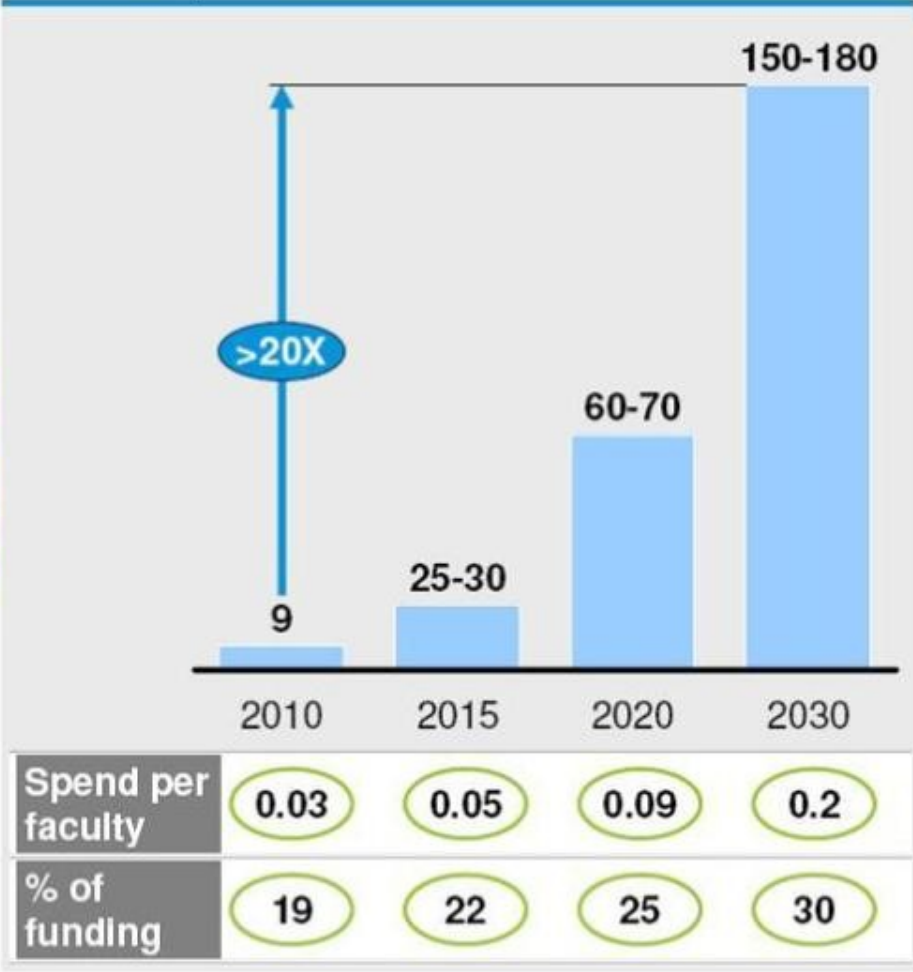
Research spend, USD million

World class universities devote 25-30% of the budget towards research

IIT K would need to dramatically increase its research spend

$100\%^1 =$ | 1,200 | 700 | 400

	Stanford	Berkeley	NUS
Non-research	70%	72%	75%
Research	30%	28%	25%
Spend per faculty	0.5	0.3	0.2

	2010	2015	2020	2030
	9	25-30	60-70	150-180
>20X				
Spend per faculty	0.03	0.05	0.09	0.2
% of funding	19	22	25	30

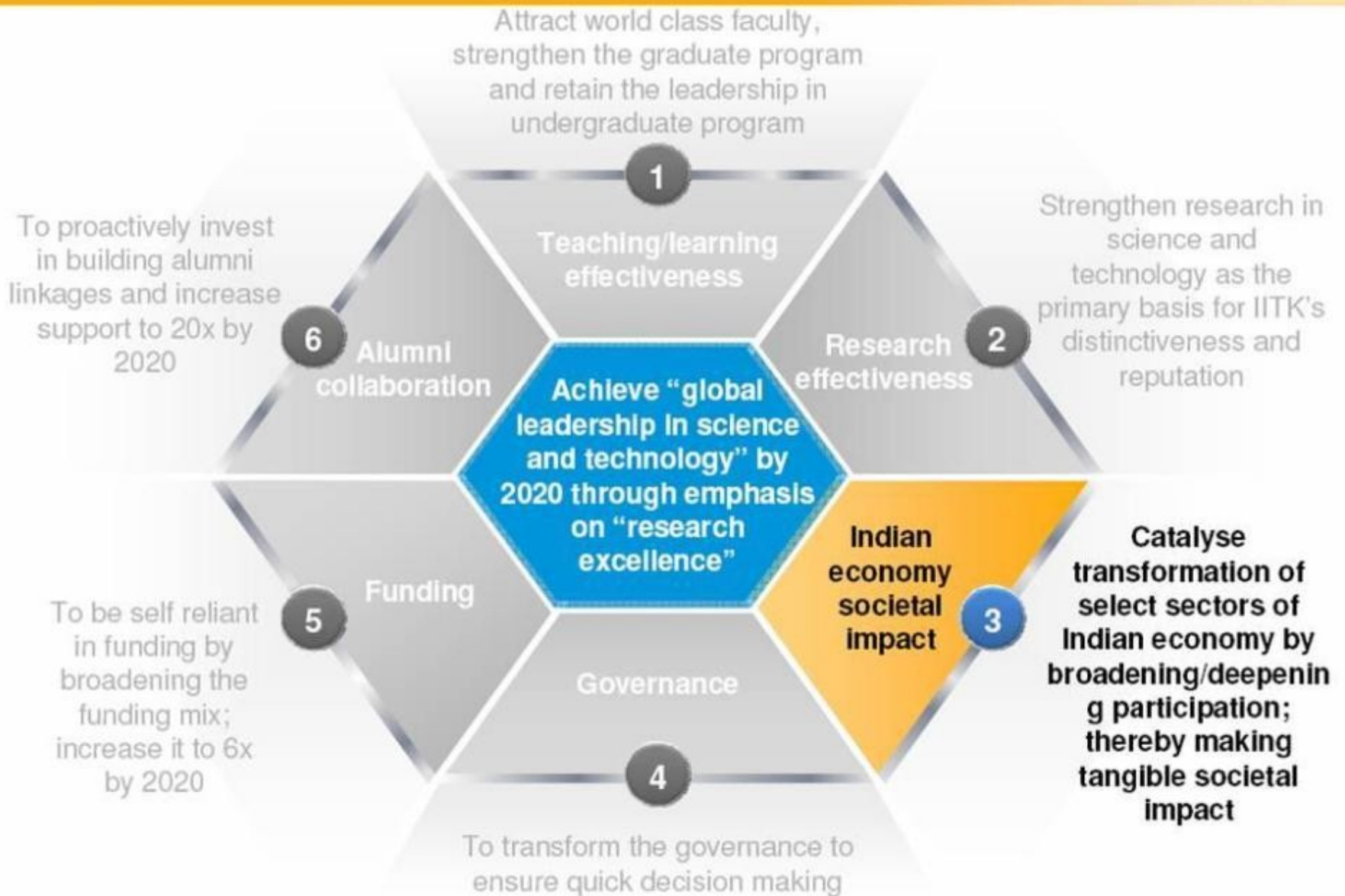1 100% indicated is the total research spend

SOURCE: Annual reports; McKinsey analysis

2. Research effectiveness

We recommend a set of 11 initiatives to strengthen research effectiveness and output at IITK

A	Attract and retain best in class faculty	**1. Invite top 25 companies to set up R&D centres at the campus (e.g., Yahoo at IIT Mumbai, Texas Instruments at IIT Kharagpur, ST Microelectronics at BITS Pilani)** **2. Partner with industry associations (e.g., knowledge partner for Indian Chamber of Commerce)** **3. Actively lobby with state and central government to establish an SEZ in Kanpur** **4. Build a research consortium of international universities for enhancing research cooperation (Kanpur Indo American Program v2.0)** **5. Create joint research proposals in partnership with government in areas such as defence, water etc** **6. Offer options of research focused career tracks for faculty**

B	Strengthen the graduate/ PhD program	**7. Reform student administration procedure**
		8. Use graduate student body to augment teaching capacity
		  – Invest in enhancing teaching skills of the Ph.D. students (e.g., preparing modules on 'how to teach')
		  – Link scholarships and incentives to amount and quality of teaching
		  – Have graduate students for conducting tutorials and examination grading

C	Continue to improve teaching pedagogy	**9. Relieve faculty from pure administrative jobs through creation of shared secretarial staff** **10. Set up shared service centres across select areas (e.g., workshops, analytic, IT, secretarial services)** **11. Ramp up strength of administrative and technical staff and significantly invest in training programs to upgrade skills**

Transformation themes for IIT Kanpur – "Indian economy societal impact"

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

Teaching/learning effectiveness

Strengthen research in science and technology as the primary basis for IITK's distinctiveness and reputation

2

Research effectiveness

To proactively invest in building alumni linkages and increase support to 20x by 2020

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Alumni collaboration

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Catalyse transformation of select sectors of Indian economy by broadening/deepening participation; thereby making tangible societal impact

To be self reliant in funding by broadening the funding mix; increase it to 6x by 2020

5

Funding

Governance

4

To transform the governance to ensure quick decision making

R&D Effectiveness

- **Introduce norm-based hierarchy in internal research funding.**

  - **Areas of national importance**

  - **Technological developments**

  - **Intramural support**

Transformation themes for IIT Kanpur – "Governance"

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

Strengthen research in science and technology as the primary basis for IITK's distinctiveness and reputation

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To transform the governance to ensure quick decision making

Our interviews with stakeholders, suggest several issues in decision making processes and support structures

Slow and circuitous administrative processes	• **Decisions are phased upwards. As a result, approval for even basic academic activities tends to take a long time (e.g., a student conducting elementary workshop could not get approval till the last date in spite of several attempts)** • **Lack of understanding of roles and poor initiative stops people from taking quick decisions**
Lack of adequate support systems	• **Diversion of faculty time to almost all administrative activities is unproductive. As a result ~40% of precious faculty time is spent on purely administrative work** • **Inadequate administrative support (both quality and quantity) across all levels** • **Lack of focus on skill up-gradation for middle management through on the job training**
Weak accountability/ incentive models	• **Lack of incentives offered for administrative positions make them unattractive** • **No performance management system to assess and evaluate the performance of the administrative positions** • **Certain leadership roles (e.g., resource generation) require industry experience which are often not available within the faculty group**

IIT K should re-visit two critical elements of the overall governance model

- Enabling organisation model

- Clear and non over-lapping roles and responsibilities

- Well defined decision making rights and selection processes

Re-design the organisation model

Strengthen processes and support structures

1

2
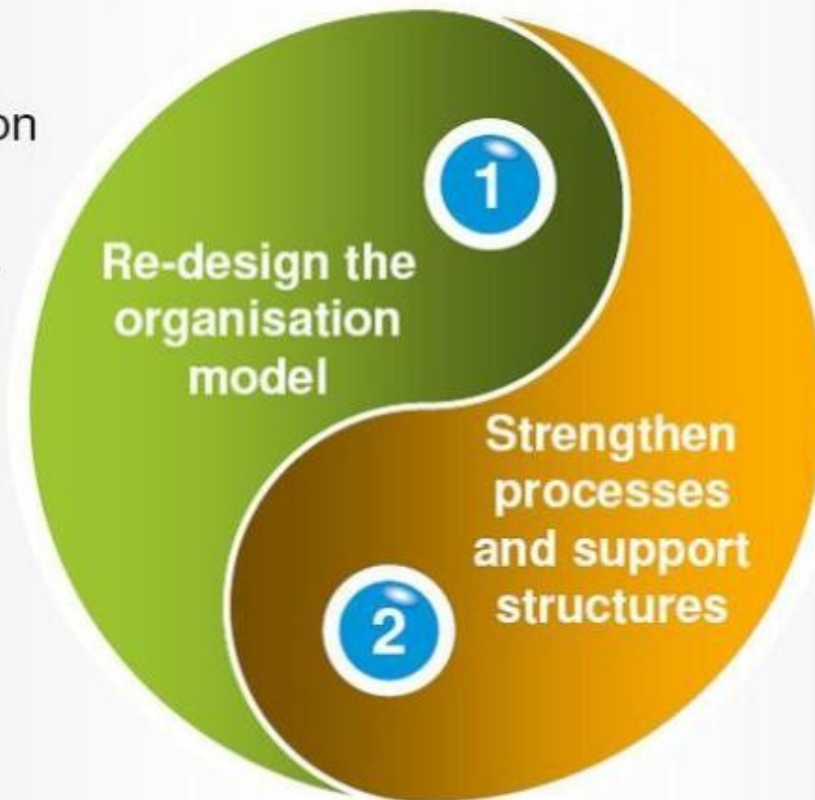
- Simplified decision making processes

- Adequate support staff

- Use of technology

- Outsourcing of non core processes

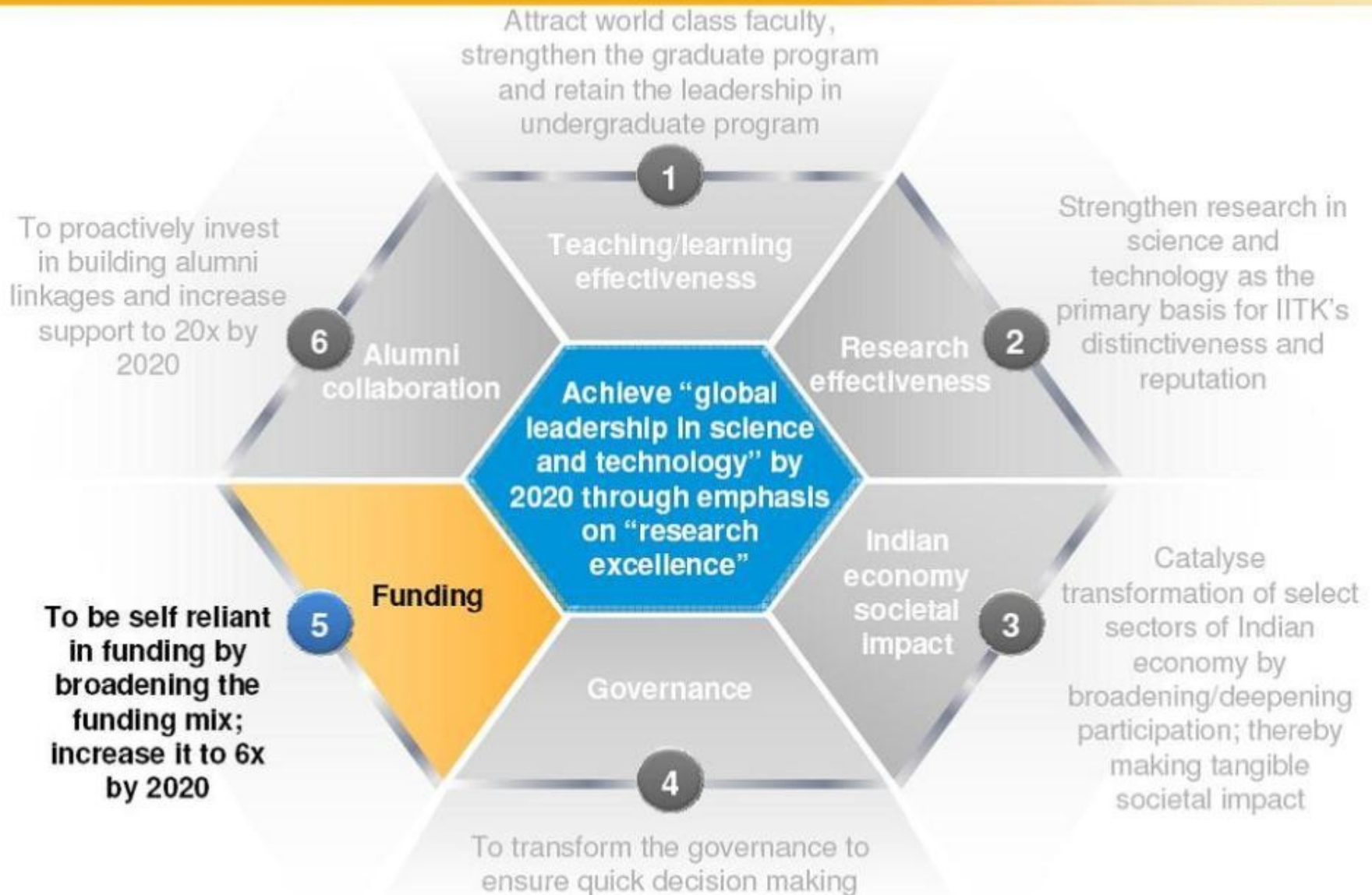- Performance management and reward system for support staff

IIT Kanpur should consider a set of eight initiatives to transform overall governance model

A	Redesign organization model	1. Redesign organization model to
		  – Empower deputy director on the lines of Provost role with focus on internal affairs; Director to primarily focus on external relations (e.g., reputation building, fund raising, etc.)
		  – Consider creation of specialist role (CFO equivalent from Industry) to manage finance and resources
		2. Re-define decision making rights to ensure greater accountability
		  – Delegate powers to Deans/Deputy Directors to resolve majority of internal issues
		  – Add associate Deans and clarify power structures
		  – Empower the HODs to enable faster decision making (e.g., broader role to play in faculty promotions, recruitment, greater financial autonomy etc.)
		  – Rationalize roles of committees and senate
		
		3. Redesign 'selection' mechanism for critical positions

B	Strengthen processes/ support structures	4. Simplify processes to minimize paper work and touch points (e.g., critical processes like new project approval, grant allotment, etc.) 5. Leverage technology to improve process efficiency (e.g., online approvals, digitization of records, digital signatures, e-faxes, etc.) 6. Rationalize support staff deployment and create shared service platform for administrative roles to augment capacity 7. Selectively outsource non core activities through robust SLA and stringent supervisory 8. Strengthen the performance management system and incentive model for support staff

Options for organisation structure for IITK

Pros | **Cons**

1

```
           Director
          /        \
   Deputy          CFO/DRPG
   Director
```

Pros:
- Reduction of internal administration load on the Director
- Clear role division enables faster and effective decision making
  - Director focuses on external linkages
  - Deputy Director as the unified academic and admin leader
  - CFO / DRPG responsible for resource management

Cons:
- Hiring an outsider might be difficult and could raise compensation issues vis-à-vis faculty
- Challenge to find a home-grown faculty member with the requisite skill sets to play the role of Deputy Director (Academics and Administration)

2

```
                 Director
              /     |      \
   Deputy      Deputy        CFO/DRPG
   Director    Director
   (Administration) (Academics)
```

Pros:
- Reduction of internal administration load on the Director
- Clear role division enables faster and effective decision making
  - Director focuses on external linkages
  - 2 Deputy Directors – Academics and Administration
  - CFO / DRPG responsible for resource management

Cons:
- Hiring an outsider might be difficult and could raise compensation issues vis-à-vis faculty
- Conflict between academic and administrative roles would be escalated to the Director

3

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                 Director
              /           \
   Assistant             CFO/DRPG
   Directors (5)

   R&D, AA, FA, SA
   and Admin
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Pros:
- Reduction of internal administration load on the Director
- Clear role division enables faster and effective decision making
  - Director focuses on external linkages
  - Dedicated Assistant Directors across five roles
  - CFO / DRPG responsible for resource management

Cons:
- Hiring an outsider might be difficult and could raise compensation issues vis-à-vis faculty
- Higher coordination effort to manage conflicts across 5 Deputy Directors
- Conflict between various functions would be escalated to the Director

Transformation themes for IIT Kanpur – "Funding"

Attract world class faculty, strengthen the graduate program and retain the leadership in undergraduate program

1

Teaching/learning effectiveness

Strengthen research in science and technology as the primary basis for IITK's distinctiveness and reputation

2

Research effectiveness

To proactively invest in building alumni linkages and increase support to 20x by 2020

6

Alumni collaboration

Achieve "global leadership in science and technology" by 2020 through emphasis on "research excellence"

Indian economy societal impact

Catalyse transformation of select sectors of Indian economy by broadening/deepening participation; thereby making tangible societal impact

3

To be self reliant in funding by broadening the funding mix; increase it to 6x by 2020

5

Funding

Governance

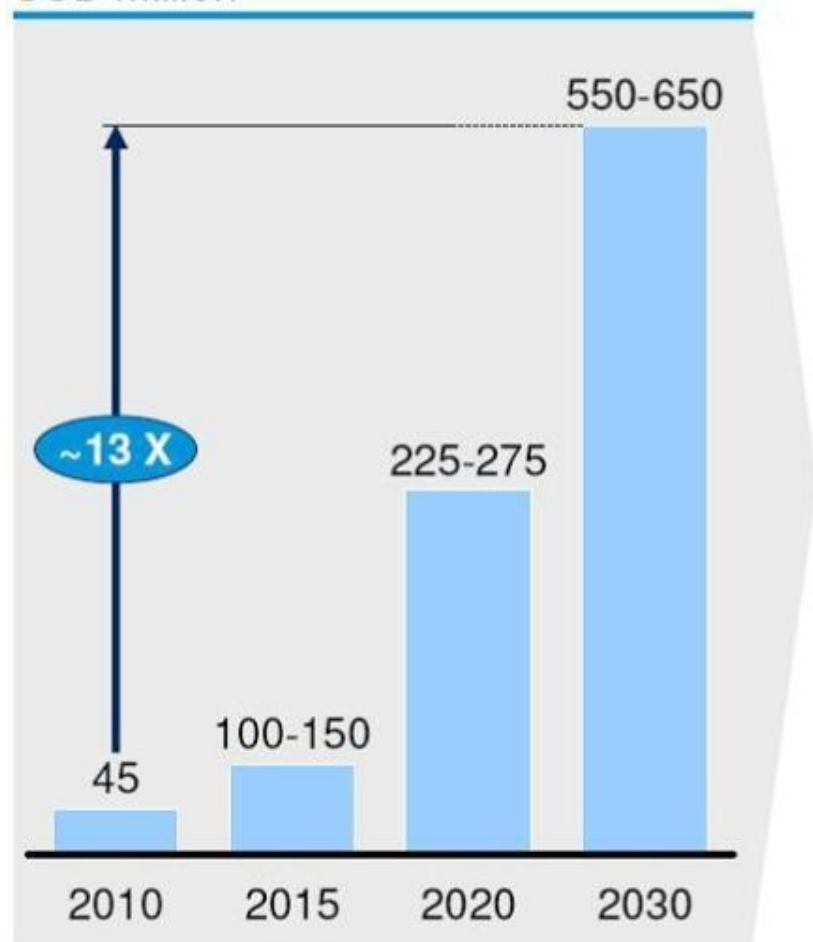**4**

To transform the governance to ensure quick decision making

IIT K would need to increase its funds several folds to realise its aspirations

Projected budget estimates for IIT K
USD million

	2010	2015	2020	2030
2010	45			
2015	100-150			
2020	225-275			
2030	550-650			

~13 X

XX — World-class university benchmark[4]

What would this mean for IITK?

	2010	2015	2020	2030
Budget per student (USD '000s)	10	20	35	60
	80			
Budget per faculty (USD '000s)	130	225	350	650
	850			

1 Average rate of inflation has been taken as 2% during the period of 2010-30 (US currency)
2 Average rate of return on capital has been taken as 15-20% during the period of 2010-30
3 Purchase power parity factor has been taken as 5:1 for 2010-20 and 4:1 for 2020-2030
4 Currency conversion rate has been taken as Rs 45 = USD 1 for 2010-2020 and Rs 35 = USD 1 for 2020 - 2030

IIT should tap into six sources of funds

1 Sponsored research

- In line with international benchmarks, IITK should aim to generate 30% of its budget through sponsored research projects (both with industry and government)

2 Endowment income

- IIT K should actively seek to improve it income from endowments by
  - Growing the size of the corpus several fold
  - Professionalising investment management

3 Tuition fees

- IIT K should strengthen its executive education program to generate additional revenues
- The student tuition should increase to account for inflation

4 Government grants

- IIT K should plan to increase the size of its government grants in proportion with increase in number of students and inflation

5 Alumni contribution

- IIT K should aim at improving the levels of Alumni contributions (chairs, scholarships, exchange programs) through improved connectedness and wider bouquet of options to contribute

6 Other sources

- IIT K should increasingly leverage other sourced of revenue (e.g. start ups, festivals, placement etc.)

IIT Kanpur would need almost USD 600 million of funding by 2030 – Proposed funding build up plan for IIT Kanpur

PRELIMINARY

	2010	2015	2020	2030	Rationale
Sponsored research	2	10	50	165-190	• Most US universities generate between 20-40 % of their income through sponsored research. Accordingly, a target of 25% by 2030, 15% in 2020 and 8% in 2015 has been taken for IITK
Endowment income	2.5	20	~40	~50	• Leading universities have endowments greater than USD5 billion (e.g., Harvard has an endowment of USD45 billion, market value of MIT endowment is USD8.5 billion). Accordingly, a target of USD500 million by 2030 has been taken for IIT K
Tuition fees (including student and executive education programs)	1.5	10	50-75	160-185	• Considering average US tuition fee is to be USD40 k, IIT K fees for 2030 has been taken to be USD10 k, considering PPP and inflation
Government grants	36	75	75-100	125-150	• Government grants to increase in proportion with the size of the institute (inflation adjusted)
Alumni contributions	1	5	20	50	• Alumni contribution for leading universities is close to USD0.9 k per alumni (e.g., Harvard with 300,000 alumni receives 237 mn USD annually, Stanford with 189,000 alumni receives 200 mn annually). We have accounted for PPP and inflation to arrive at a target in line with world class universities
Other sources	1.5	3	10	25	• Assuming a 10% increase y-o-y
Total income	**45**	**~125**	**~250**	**~600**	

We recommend a set of 6 initiatives for IIT K to significantly grow its funding base

A **Strengthen the DRPG office**

1 Hire a full time non-academic professional (e.g., equivalent of a CFO from Industry) to manage and drive the fund campaign

– IIT Kanpur needs to make the position financially attractive and in line with industry standards

B **Develop an actionable fund raising strategy**

2 Define a 5-10 year funding plan including sources and mix of funds

3 Create actionable out-reach campaigns (e.g., roadshows, alumni events, etc.)

4 Identify sponsors to drive targeted campaigns – both internal as well as influential alumni from industry and academia

C **Create a wider bouquet of options**

5 Create a wider bouquet of product offerings (e.g., "Adopt a desk" on the lines of 'adopt a kid' could be a small denomination product to naming of lecture complexes)

6 Ensure better visibility for major donors (e.g., creation of a wall with all donor names for significant contributions)

1 KIAP stands for Kanpur Indo American Program under which a consortium of 9 US universities supported IIT Kanpur during initial stages

Transformation themes for IIT Kanpur – "Alumni collaboration"

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Governance

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5

4

To transform the governance to ensure quick decision making

IIT Kanpur should consider a set of six initiatives to benefit from Alumni collaboration

A **Strengthen the alumni network**

1 Restructure the alumni network
- A global alumni council with a chapter in each country
- Each chapter to have sub chapters on a city basis

B **Enhance connectivity**

2 Explore options of organising more frequent reunions (e.g., organise reunions every five years)

3 Design a buddy program with a recent alumni (2-5 years) mentoring pre-final year students

4 Overcome locational challenge through technology and creation of satellite location

C **Benefit from Alumni linkages**

5 Actively identify and seek support from IIT K Alumni at large companies and institutions (e.g., Fortune 500) – research, training and funding

6 Seek support from IIT K Alumni in academia to strengthen research and teaching effectiveness
- Build exchange programs with the universities
- Invite to conduct guest lectures/take courses