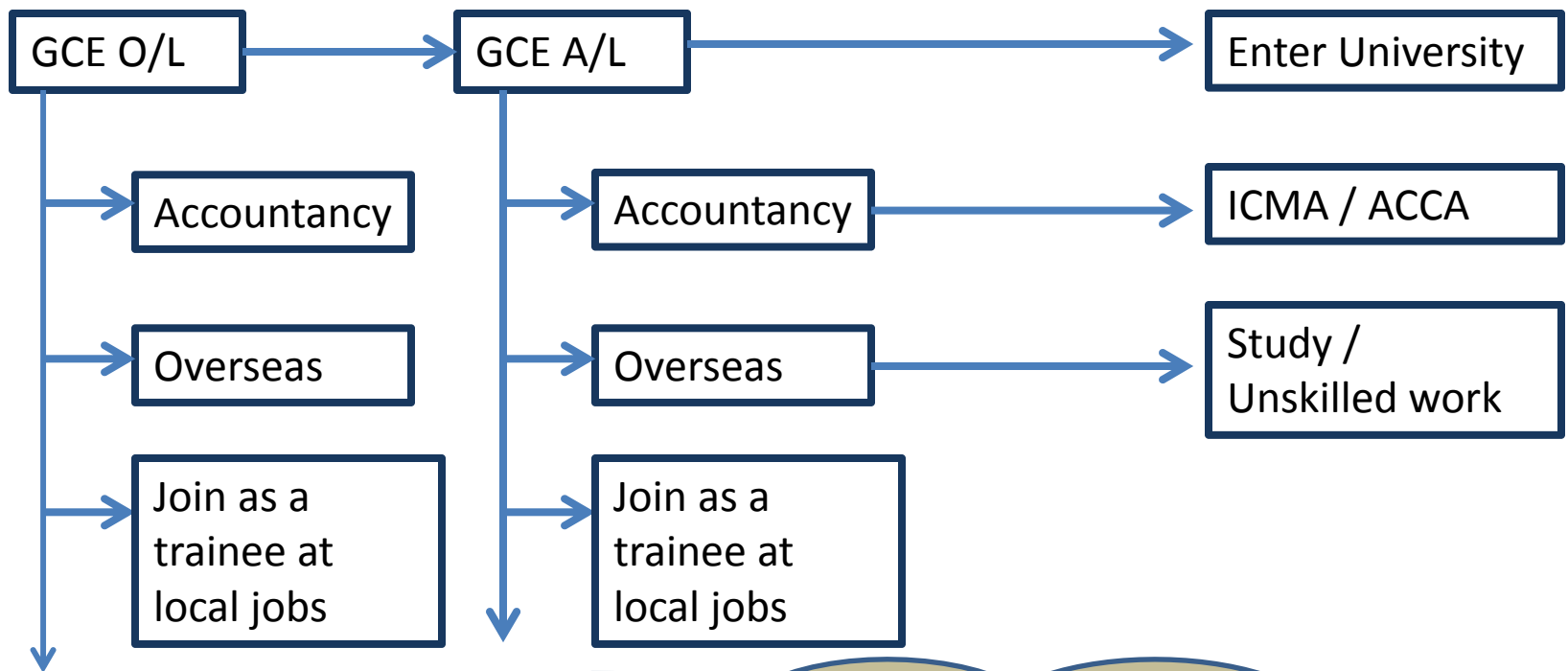


TECHNOLOGY STREAM ST. PATRICK'S COLLEGE



Prior Educational System in Sri Lanka



Others?????



**Wondering
what to do
next.....**



and crying.

Intro of Technology Stream in Sri Lanka

- A new Degree titled Bachelor of Technology (BTec) was introduced in universities in 2016 with the hope of changing the Science faculty to Science and Technology.
- As a prelude, a new Technology stream for GCE Advanced Level (AL) students was introduced.
- The stream was initially introduced to 250 schools, and expanded to 1,000 other schools chosen by the ministry.
- At least 3 schools in every Assistant Government Agents division are equipped / updated with the new stream.
- Students can select 3 subjects from Engineering or Biosystem Technology, Science for Technology or one subject from a group of 10 subjects.

Current Status

- The shift to integrating internet and digital media is new to the Northern Province
- Northern Province Educational Institutions are behind in Technology education
- Under Mahindodaya's initiative, Government schools have begun creating Technology Centers, but there has been slow progress despite excellent Govt. funding
- With a lack of clear strategy and leadership, there has been a slow execution of Technology Introduction
- Even though the Established Technology Center in Jaffna College is considered a leading institute, the facilities and course curriculum are still sub-par.

Objective – Mahindodaya's

- So what is Mahindodaya's Technology Introduction?
- Start Technology Introduction from G.C.E O/L onwards
- Resolve the inequalities in the selection of subject streams at the G.C.E. A/L
- Provide significant practical experience in addition to theory, which would provide industrial experience

Diversification from Arts to Technical

Subjects	Present Status	Expected Status	Delta
Mathematics	22%	40%	+ 18%
Commerce	27%	35%	+ 8%
Arts	51%	25%	- 26%

Objective: Extending to SPC's

- Produce science scholars with higher education to meet the demands of the current job market
- Cultivate students with the skills necessary to find technical solutions to real world problems & applications
- Conduct classes in English in order to market skills suitable for the job market and for higher education
- Direct the students towards entering professional education according to the national professional qualifications structure
- Assist students with their development of technical skills to launch Global Technology and promote Technical competency leading to Foreign Investments in Sri Lanka

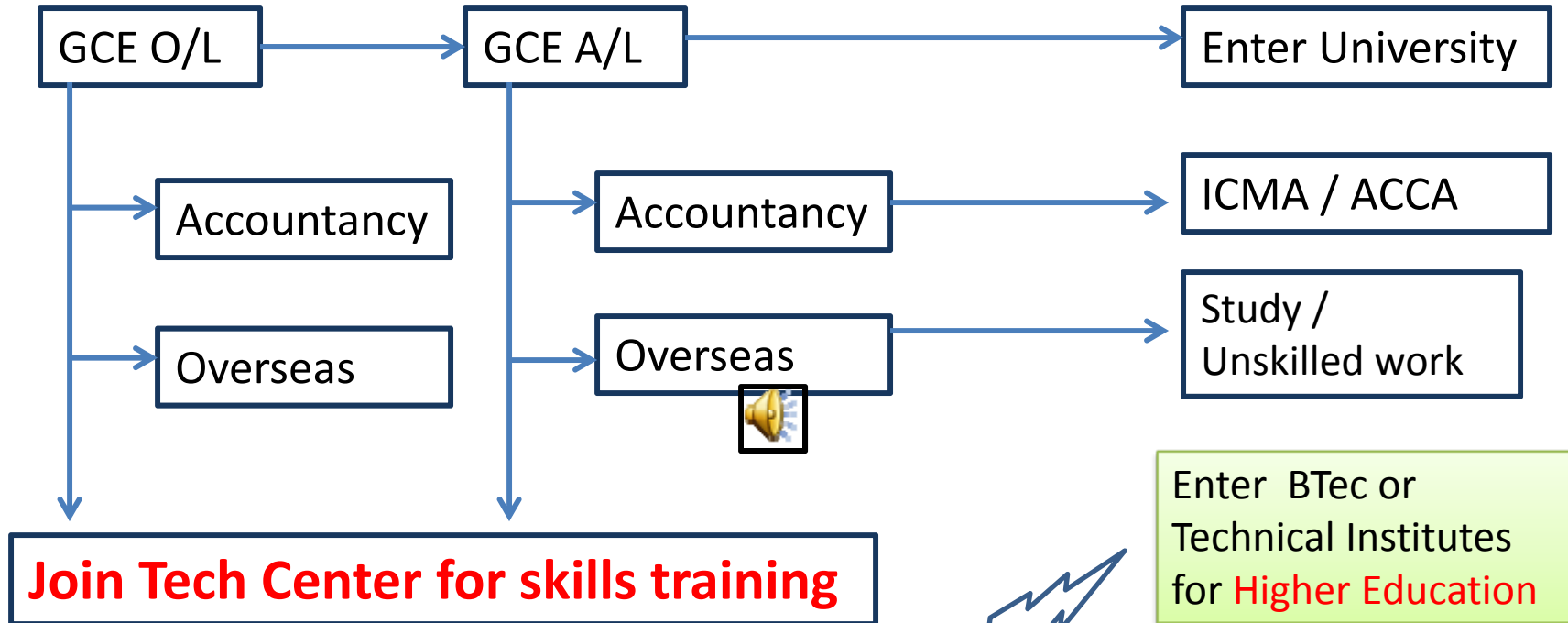
Technology Stream – implementation options

- Advanced Level students have an option of selecting a new stream of study.
- The stream will include technical subjects such as Information Technology, Electronics, Civil Engineering, Mechanical Engineering, Agriculture, Bio-resources and Food Sciences to give students more practical knowledge in preparation for employment after school education.
- *In addition, technical exposure can also be made available for O/L level students at SPC*

Technology Stream – implementation options

- Hard and Soft Technology Options
- Hard Technology subjects – Mechanical Technology, Electrical Technology, Civil Technology
- Soft Technology subjects – Food Technology, Agro Technology, Bio-Resource Technology
- Other available subjects – These subjects would be selected in addition to or as replacements for available subjects: Mathematics, Physics, Chemistry, Biology, Information Technology, Economics, Accountancy, Geography etc.

Empowered by Tech Center Training



After I have these skills, I have the opportunity to...



Enter BTec or Technical Institutes for Higher Education

Start A Business

Pursue overseas careers as a Skilled Person

Join as a Trained & Skilled Employee at Local & Overseas jobs

SPC'S
TECHNOLOGY
COURSE
OFFERING
PLAN

SPC Technology Stream Strategy

- Develop and implement a plan that will provide for a steady rate of implementation
- Focus on Engineering Technology subjects;
 - **Engineering Technology**
 - Mechanical Technology
 - Electrical Technology
 - Civil Technology
 - **Bio Systems Technology**
 - Food Technology
 - Soil and Water Technology
 - **Science for Technology**
 - Agriculture
 - Bio Resources Technology

Engineering Technology

Grade 12 Courses	Grade 13 Courses
Introduction to Engineering Technology	Electrical Machinery and Power Systems
Basic self-movement Technology	Basic Electronic Technology and Practice
Basic Electrical Technology / House wiring	Domestic Water Supply and Garbage Disposal
Basic Construction Technology	Fluid Machinery (Pumps and Turbines)
Basic Production Technology / Assembly Techniques	Engineering Conventions and Quality Assurance Systems
Engineering Drawing	Land Surveying
Units and Measurements	Estimating and Quantity Bills Preparations
Movement and Power Transmission Bases	Entrepreneurship and Management
Hygiene and Safety for Technology	

Science for Technology

Grade 12 Courses	Grade 13 Courses
Micro Biology	Mechanical Energy
Importance of Molecules	Hydrostatics
Basic Mathematics	Natural Products
Pythagoras Connectivity	Coordinate Geometry
Measurement Methodologies	Mechanical Quality of the Matter
Basic Concepts of Heat Chemical	Electricity and Magnetism
Computer	Chemical Industries
Computer Management System	Movement
Trigonometric Ratio	Nano Technology
Heat	Statistics
Basic Concepts of Kinetic Chemistry	Technical Development and the Environment
Multi-Organic Matter	
Software Application	
Internet and Communication	
Power	

Bio Systems Technology

Grade 12 Courses	Grade 13 Courses
Introduction to Bio Systems Technology	Animal Production Technology
Water Science and Meteorology	Environmental Tourist Industry
Link between Soil and Water	Food Conservation
Land Surveying and Measuring	Nursery Plant Production
Plant Spreading Methods	Crops Cultivation under Controlled Conditions
Food Security	Farm Structure
Post-Harvest Technology	Farm Mechanization
Food Packaging and Labeling	Landscaping and Flower Cultivation
Food Ingredients Ratio Determination	Aquatic Bio Resources Industry
Electronic Technology and Equipmentalization	Forest Conservation and Forest Productions
Quality of Water and Water Purification	Productions related to Latex and Juice
Water Lifting	Energy Problem and Solutions
Water Supply	Professional Health and Security
Pest Management	Entrepreneurship

INFORMATION

TECHNOLOGY

LAB

Information Technology

- In addition to Technology Stream, heavy focus should be placed on Digital Media and Information Technology.
- Must improve St. Patrick's students' knowledge of Information Technology via:
 - Basic SW applications such as Word, Excel and PowerPoint
 - Introduce email application for standard communication
 - Introduce web search knowledge for information gathering from search engines such as Google
 - Introduce advanced Computer Aided Design (CAD) packages for architecture and modeling.
- **Need to have a centralized location for IT with easy access to all students.**

Information Technology Contd...

- What we have today:
 - 25 work stations, isolated
- Goal:
 - To add additional 60 work stations to facilitate all students from OL onwards to be able to use the IT center.
 - The IT center will also provide the required printers, wireless access and other hardware
 - SW purchase is not included in the below estimate

Information Technology Cost Estimate

	Phase 1 2016	Phase 2 2017	Phase 3 2018	Total Needed in SLR	Total Needed in GBP
Total Needed	Rs.5.2M	Rs.0.00	Rs.0.00	1 st Year: 5.2M	1 st Year: 26,000

Information Technology Contd...

IT COURSES PLAN	Phase 1	Phase 2	Phase 3
Fundamentals of IT	X	X	X
Microsoft Office: Word, Excel, PowerPoint	X	X	X
Use of Internet & Email	X	X	X
Hardware applications	X	X	X
Microsoft Project	X	X	X
Operating Systems		X	X
Information Systems		X	X
Network		X	X
Website Development		X	X
ICT Development		X	X
Software Engineering			X
Python Language			X
Mathematics for Computing			X
Computerized Accounting			X
Computer Graphic Design: Autocad			X

Hidden Opportunity

- Think of the concept of Private Tuition by our excellent teachers of Maths, Chemistry and Physics during our time
- With the same concept, superior competence and sophisticated lab infrastructure will attract students
- Can introduce day time occupancy to SPC students and can open to other students for evening sessions

Outcome:

- Provides additional income
- Will improve reputation
- Will attract and retain superior students from other schools

STRUCTURAL

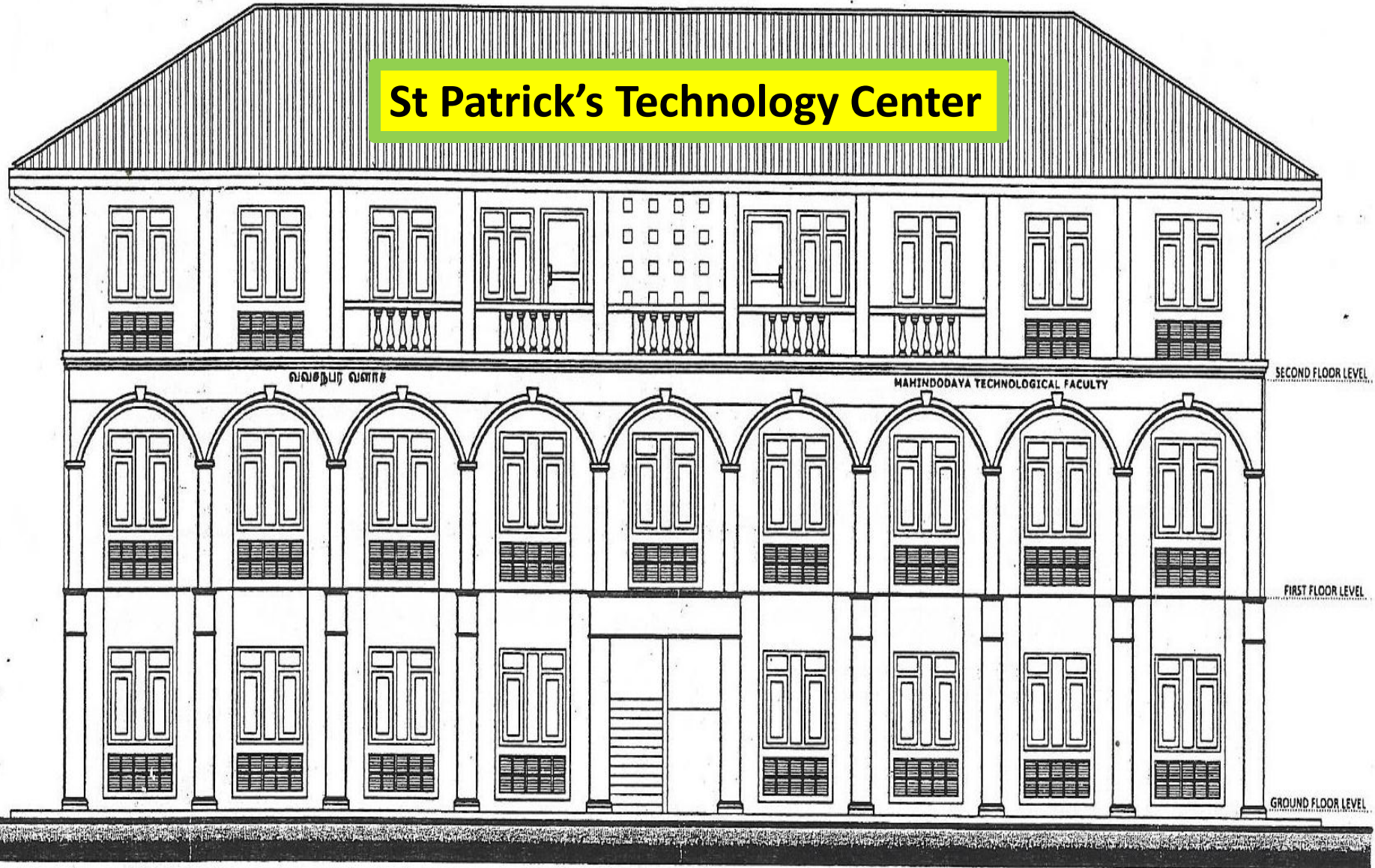
PLAN

Structural Plan Strategy

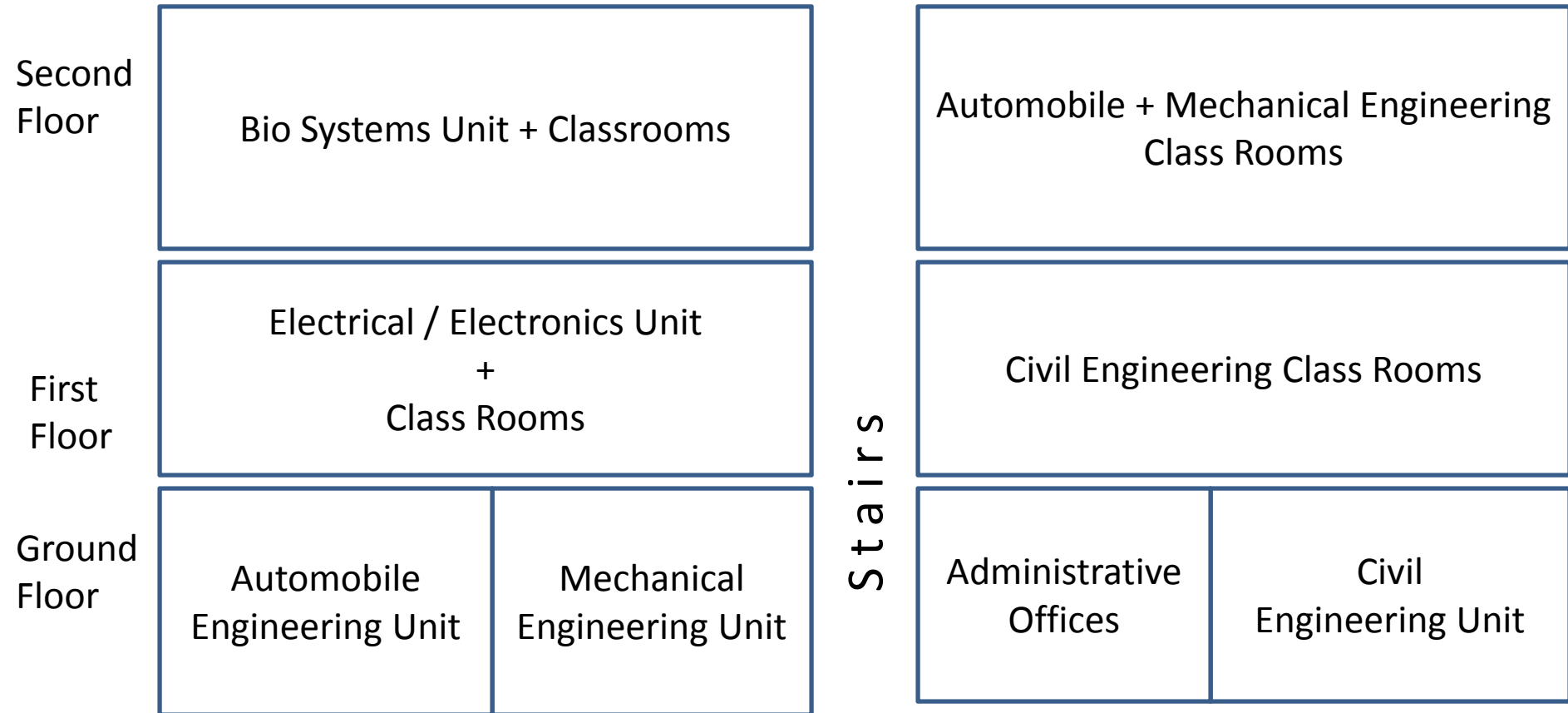
- Follow Government's building structural plan to accelerate the approval process and implementation
- The above does not include SPC's plans such as:
 - IT Lab expansion
 - External amenities such as parking and toilets
 - Solar system to reduce energy cost
- Government has allocated and distributed Rs.30M for the external structure, excluding the equipment, to the Government schools.
- Additional funding of (est.) Rs.7-8M to Govt. schools is targeted for equipment purchase.

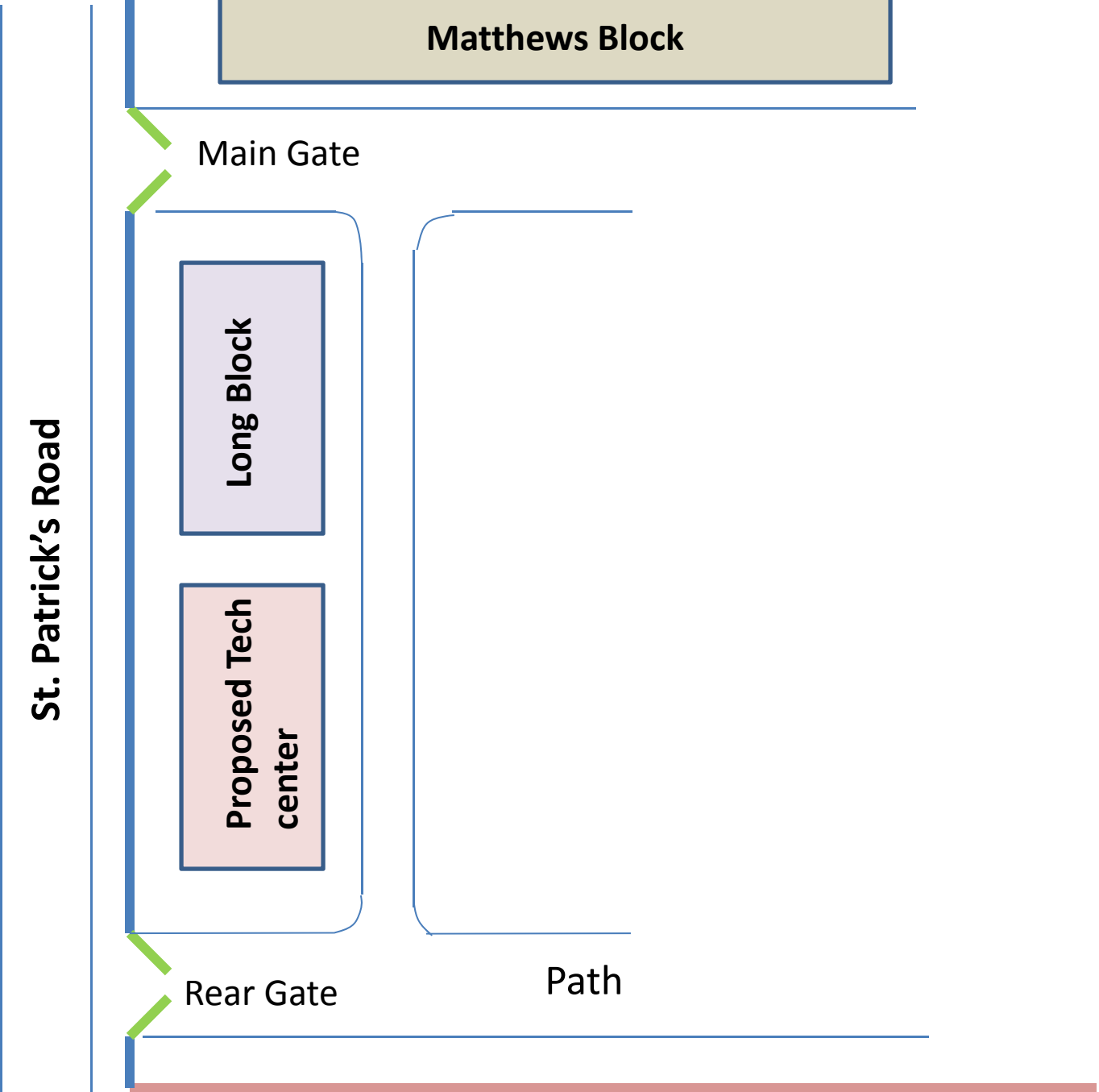
External Structure (~90ft x 30ft)

St Patrick's Technology Center



Structure (Internal) – Preliminary Plan





COST
ESTIMATE
SUMMARY

Tech Center Cost Estimates (SLR)

Engineering Technology

Equipments Cost	Phase 1 (by 11/2016)	Phase 2 (by 02/2017)	Phase 3 (by 05/2017)	Total in SLR
	Rs.1,231,400.00	Rs. 663,100.00	Rs.837850.00	Rs.2,732,350.00

Science for Technology

Equipments Cost	Phase 1 (by 11/2016)	Phase 2 (by 02/2017)	Phase 3 (by 05/2017)	Total in SLR
	Rs.101,500.00	Rs. 133,600.00	Rs.175,500.00	Rs.410,600.00

Bio Systems Technology

Equipments Cost	Phase 1 (by 11/2016)	Phase 2 (by 02/2017)	Phase 3 (by 05/2017)	Total in SLR
	Rs.260,700.00	Rs. 173,700.00	Rs.94,700.00	Rs.5,29,100.00

Misc. Cost: Ext. toilets, solar, furniture etc

Equipments Cost	Phase 1 (by 11/2016)	Phase 2 (by 02/2017)	Phase 3 (by 05/2017)	Total in SLR
	Rs.1,537,200.00	Rs. 412,200.00	Rs.60,000.00	Rs.2,009,400.00

Summary of Funds Needed

Technology Center

ITEM	Phase 1 (by 11/2016)	Phase 2 (by 02/2017)	Phase 3 (by 05/2017)	Total Needed in SLR	Total Needed in GBP
Construction	Rs. 15,000,000	Rs. 10,000,000	Rs. 5,000,000	Rs. 30,000,000	~150,000
Equipments + Misc cost	Rs.3,130,800	Rs.1,382,600	Rs.1,168,050	Rs.5,681,450	~29,000
Total Needed in SLR	Rs.18,130,800	Rs.11,382,600	Rs.6,168,050	Rs.35,681,450	GBP: ~179,000
Total Needed in GBP	GBP: 90,654	GBP: 56,913	GBP: 30,840	GBP: ~179,000	GBP: ~179,000

Information Technology

	Phase 1 2016	Phase 2 2017	Phase 3 2018	Total Needed in SLR	Total Needed in GBP
Total Needed	Rs.4,582,750.00	Rs.0.0	Rs.0.0	1 st Year: Rs.4,582,750.00	1st Year: ~23,000

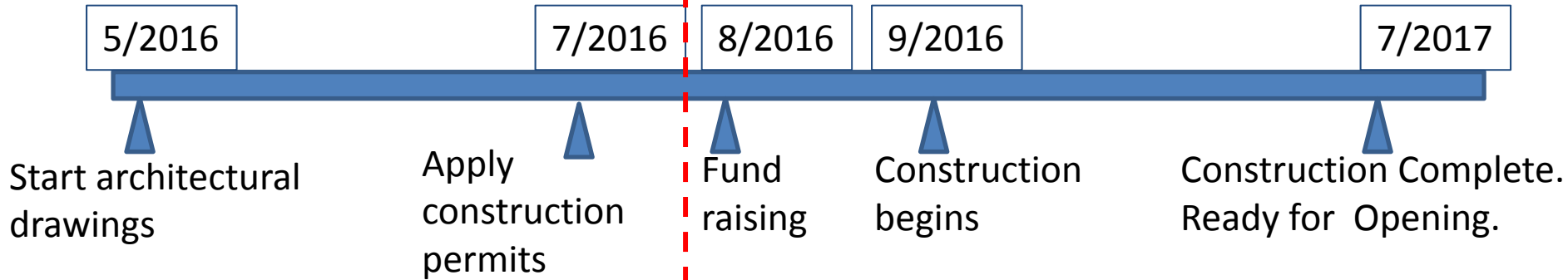
- SPC needs to be competitive and above par with Govt. schools to attain highest level of recognition in education and to attract & retain good students**
- SPC is a private Institution. This project needs to be funded privately.**
- Funds will be managed by assigned staff of SPC.**
- Monthly reports will be available via web, reporting on:**
 - **Total funds needed vs. received**
 - **Completed work and expenditure**
 - **Progress assessment of budget vs. actual**
 - **Progress of planned schedule vs. actual**

Planned Schedule

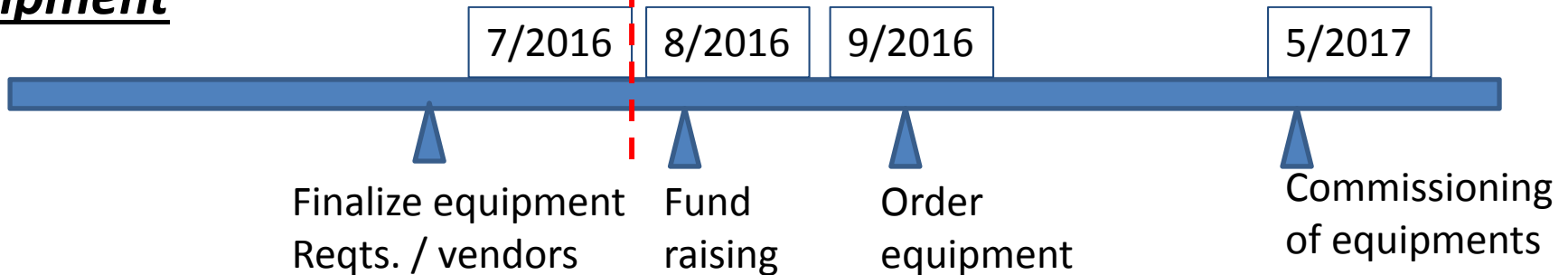
Course Offering



Construction



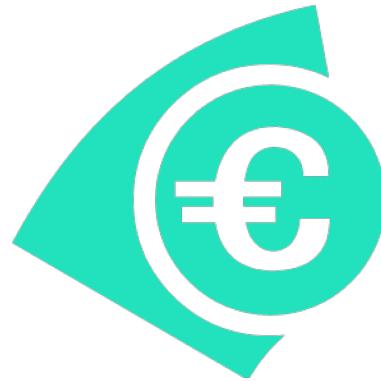
Equipment



It's an aggressive plan but its doable with funds.

SO.....WE NEED

FUNDS



Contributions & Recommended Methods

- ❑ *Smaller and frequent contributions are also welcome. Every contribution will make this dream happen.*
- ❑ *Obtaining the total funds at the beginning may not be possible. It will be a Phased approach and we shall continue to raise funds as we progress, counting on your continued support.*
- ❑ *Recommending contributions to be made via SPC UK Alumni Association to:*
 - *Gain tax benefits to the donors at a rate of 22% (est.)*
 - *Documented contribution and transfer of funds within countries (UK and Sri Lanka)*
- ❑ *Please do not make any CASH contributions. Contributions by CHECKS or ON LINE TRANSFER is recommended to maintain records.*

PLEDGE FORM IS ATTACHED

AS A WORD DOCUMENT.

THANK YOU FOR YOUR

GENEROSITY AND SUPPORT

FOR OUR FUTURE PATRICIANS.