Can you make every city a

SMART CITY?

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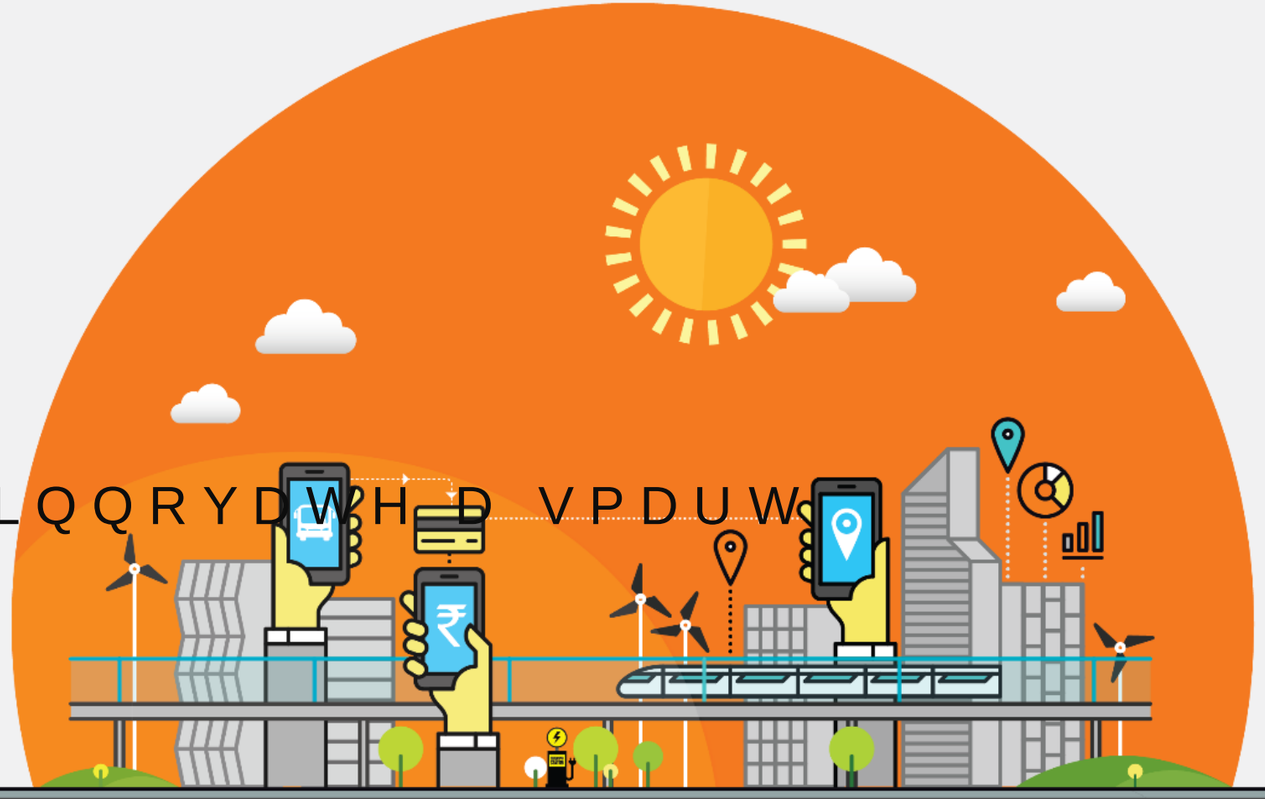
& meaningful solution



What is Smart Transportation ?

What comes to your mind when you think of smart transportation?

Obviously a solution or technology that is independent of the fossil fuel powertrains (eg. Electric or fuel cell technology), maintains safety, smooth traffic flow and is environmentally friendly and sustainable.

Smart transportation would also include advanced systems for preventing accidents via vehicle-to-vehicle and vehicle-to-infrastructure communications.

It can also be evolution of new paradigms like car sharing, electric mobility, Mobility as a Service (MaaS), and a system-based demand-response approach to optimize the entire transportation system.

We have some points mentioned in the below table for you to ideate on and make this big change possible.

Electric Vehicles/ Hybrid electrics	System Safety & Reliability	Battery Diagnostics & Prognostics	Increasing performanc e of Motor	Diagnostics in EV/HEV	Increasing top speed of EV & to increase range	Fast charging technologies Appropriate infrastructure for charging stations	Weight reduction & New Materials	Autonomous Control Systems
Conventional Powertrain	Emission Control & IC Engine Technology	Efficiency Improvement	Weight Reduction	Ride Comfort & Mechanisms	Connected Vehicles	Infotainment	Better/ Alternate fuels	New Materials
Fuel Cell Technology	Storage systems & Recharge systems	New Methods of energy generation	Alternate Powertrain	Material Properties by Design	System Integration	Endurance and Reliability	New balance of plant (BOP) concepts	New fuel cell materials

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What is Smart Infrastructure

What comes to your mind when you think of Smart Infrastructure

A smart system uses a feedback loop of data,which provides evidence for informed decision-making. The systemcan monitor, measure, analyze, communicate and act, based on information captured from sensors. Different levels of smart systems exist.

A system may:

- collect usage and performance data to help future designers to produce the next, more efficient version;
- collect data, process them and presentinformation to help a human operator to take decisions (for example, traffic systems that detect congestion and inform drivers)
- use collected data to take action without human intervention

Smart Infrastructure	Robustness of Design	Data quality and management	Privacy concerns	Cyber security	Telecom Services	Real-time information to users	Traffic Decongestion Strategies	Intelligent Transport Systems
	Vulnerability	Analysis of data	Cloud Systems	Safety of Citizens	Re-engineering electrical systems	Automated sensing	Transportation Modalities	Electric Vehicle Charging Stations
	Biometric identification	Machine learning	Reducing Cost	New Materials & reducing Material usage	High Quality connectivity internet	Smart Signaling, Multimodal Information System	Others	Smart Sensors Integration to Transport Network & Infrastructure
Energy	Energy Generation	Energy Storage Systems	Optimizing Consumption	Reducing Losses	Green Energy Technologies	Energy Transmission	Flywheel Energy Storage (FES)	Smart Grids

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Awards

Attractive Prizes, Benefits & Career Opportunities

₹ 12 Lakhs	₹ 6 Lakhs	₹ 2 Lakhs	₹ 1 Lakh
Platinum	Gold	Silver	Most Popular Project

- Win awards over 20 lakhs !!!
- Get featured in KPIT Sparkle Hall of Fame in association with COEP
- Get considered for job & internship opportunities with KPIT
- Present ideas to industry leaders
- Be considered for research grants
- Be recognized by media
- Get assistance for your start-up from COEP

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Time Schedule - Phases for the competition

KPIT Sparkle contest will be spread over three phases, starting in May 2016. At each step you or your team (maximum five members) will be required to perform certain tasks. A team of experts will be evaluating your process and progress in each phase.

Registration Idea Submission/Evaluation
23 May - 31 Aug 2016

Prototyping
1 Sep - 31 Dec 2016

Selection for Finale
1 Jan - 30 Jan 2017

Finale at Pune
Last week of Feb 2017

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What is Expected from the Student (1/4)

Who can register?

This contest is open for all science and engineering students across **India** who have completed their high school education.

What is the registration fee?

Registration is free of cost.

How can I register?

For registration please click on: **www.kpit.com/sparkle**

click on **"Register now",** select either **"Individual"** or **"Team"** and enter all required information.
PLEASE NOTE: "Team" can only be registered by the team leader. Each team must appoint a leader who will represent the team. The leader will be the KPIT contact person and must act as coordinator between the other team members. After registration you will receive a mail with a link for verification of your email-id.

Why do I need to verify my email address?

We require that you verify your email address to create a KPIT Sparkle account. This will help us to verify that the email address doesn't belong to someone else. Please note that this is a two-step process. You need to first register and confirm your registration based on a valid e-mail-ID. After verification of your e-mail-ID you can login and register the other members of your team. Once that is done, you will be able to upload your idea and any other relevant documents in the portal.

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What is Expected from the Student (2/4)

What is expected from the participants?

A fundamentally innovative idea is the core focus of our competition. The idea must be realized in both:
Idea submission over an online form (Phase 1) and a prototype (Phase 2).

What should the team size and the team configuration be?

You can participate either as an individual (=1 member) or as a team (maximum team size: 5 members).
There is no restriction on team configuration; team members can be from same or different department(s).

What will happen in Phase 1: Idea Submission?

Idea submission between **23 May - 31 Aug 2016.** In Phase 1 you can submit your idea over an online formula.
PLEASE NOTE: At this stage of the competition, you are not required to build a prototype.

According to which criteria's will my idea be judged?

Your idea will be judged on the following criteria, in order of importance:

- Innovation
- Social Impact
- Technical Knowledge
- Completeness of prototype

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What is Expected from the Student (3/4)

How will the submitted Ideas be selected for Phase 2?

The organizer, assisted by KPIT's R&D experts, along with independent external experts, will evaluate, filter, and select the best ideas according to above mentioned criteria, which will be nominated for phase 2.

How will I know if my idea is accepted?

KPIT will send an email to your registered email ID which mentions your idea being selected to Phase 2, **23 May - 31 Aug 2016**

How do I proceed if my idea is selected?

Once your idea/solution gets shortlisted, you can start working towards creating a prototype of your idea for further evaluation.

What will happen in Phase 3: Prototyping?

The prototype phase will be from **1 Sep - 31 Dec 2016** . In phase 3, participants needs to prepare a prototype to show how their idea could be executed in reality and submit short description and video (~ 3 minutes) to show the working of their prototype .

What is a prototype?

The required prototype is per definition a sample for evaluating the functionality and importance of your idea. It should be a working model to showcase the innovation you are claiming.

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What is Expected from the Student (4/4)

What is accepted as a prototype?

The following formats for building a prototype are accepted:

- Software ² if it is a algorithm as the final output.
- Hardware
- Implemented on a vehicle.

How will I know that I'm invited to the final event?

KPIT will send you an email to your registered email ID with further information regarding the final presentation. The format of the presentation will also be sent across **1 Jan - 30 Jan 2017**

What does Final Presentation mean?

At the end of all presentations an independent jury consisting of reputable experts will assess the best ideas and give ratings based on defined parameters according to the award criteria. All potential awardees will be invited to this ceremony held in Pune as a 3 day event. During the final presentation you will have the unique opportunity to make yourself known to KPIT and the members of our jury . The best innovations will also be rewarded after the final presentation with cash prizes or attractive benefits.

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Innovators Wanted. Get Rewarded.

Student Contest: KPITSparkle

Website for Registration will be open on

31 Aug 2016

Contact:

Email: KPITSparkle2017@kpit.com | Website: www.kpit.com/sparkle

What is KPIT? (1/4)

$500 Million revenue per year

10000+
Employees worldwide

10 Development centers
34 Offices in
16 Countries

20 Automotive OEMs & **50+** Manufacturing companies as long standing clients

Employees representing over
25 Nations

40% CAGR in Last 12 Years

60+ Patents filed in less than 5 years

Winner of **9** Innovation Awards in 2 years

KPIT is a global INNOVATION technology company specialized in providing Product Engineering and IT Consulting solutions and services to Automotive & Transportation , Manufacturing and Energy & Utilities companies.

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What is KPIT? (2/4)

KPIT is a focused technology solution provider dedicated to help address the critical needs of our core customers for 3 verticals

- Automotive & Transportation
- Manufacturing
- Energy & Utilities

KPIT =

Product Engineering

&

Information Technology Consulting

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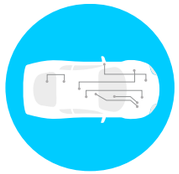
What is KPIT? (3/4)

KPIT is strong in Embedded Electronic Systems and is always looking for talented engineers and students who are interested in innovation.

AUTOSAR &
In Vehicle Networks



Body Electronics

Chassis , Safety and
Driver Assistance

Engineering
Design

Functional Safety
ISO 26262

Infotainment

Instrument
Clusters

Powertrain

Vehicle
Diagnostics

Want to know more about us ? Go to **www.kpit.com**

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What is KPIT (4/4)

KPIT *as an employer*

We offer

- A multinational work environment
- Opportunities to handle projects across geographies
- Company values that foster and support employee initiative

A focus on community and professional development

Technologies for a better world.