National e-Learning & e-Agriculture Platform Enriched With Big Data Deployed On Cloud
Cloud computing is defined as a type of computing that relies on sharing computing resources rather than having local servers or personal devices to handle applications.

**Big Data**

Big-data requires ‘bottom-up’ approach in analysis, i.e. finding relations first and mapping with use cases.

Big data bring about by integration multiple sources at an alarming velocity, volume and variety.

New correlations that were never thought of to improve the productivity, effectiveness and efficiency. Moreover to make more informed decisions.
Why Cloud & Big Data? How would it matter??

GREEN, cost-effective supports high growth large scale deployments

Seamless Expansion, Replication and decommissioning

More resilient for Disaster: inherent disaster recovery capability

Improve utilization of physical HW and Storage

Big Data inherently requires cloud for all of the above reasons

BIG DATA

Provide more informative decision making ability

Help intelligent resource distribution, sharing and optimization

Find innovative approaches to traditional problems with the help of newly found co-relations
How to Operationalize? Where should we start from?

Cloud brings common advantages across industries. IT IS THE CLOUD BASED SERVICE WHICH CREATE THE MAGIC.

Operationalization is not just having the platform, big-data analytics or the services...the SUSTAINABILITY LIES WITH building the ECO SYSTEM to operate and evolve the technology.

In Sri Lanka there’s NO BETTER PLACE TO START with than universities; using the infrastructure and connectivity of LEARN (Lanka Education And Research Network)

Start teaching the concepts, facilitate training and BREED TECHNOLOGY PROFESSIONALS.
As I see the success of an e-learning platform depends on meeting two main objectives, namely;

1. Inclusion: Wider inclusion of the population to promote **EQUALITY**

2. Enrichment: is about **ELEVATING** the learning experience of all involved

Hence I propose ‘**ELEVATED EQUALITY**’ as the theme of the e-Learning platform

All included yet even the most advanced participant is elevated to the next level.
Explaining the e-Learning platform

The platform is best understood with use cases. In other words what are the services it should offer to achieve ‘elevated equality’ ...........So what are these services to offer ??

1. Ubiquitous Access
2. Online Content Library
3. Optimal resource distribution, sharing and utilization
4. Big Data based predictive analysis
5. Discussion Forum / Chat Space
6. Reward system to improve the usability (participating surveys, answering queries, suggesting improvements, etc)
1. Ubiquitous Access

The platform should accommodate all the access methods to eliminate digital divide and to promote equality.

The content in every format arranged in knowledge areas should be made available in all languages.

2. Content Library
3. Optimal resource distribution, sharing and utilization

- Kandy Mahamaya year 11 English Class is streamed to one of the estate schools in Nuwara Eliya
- Jaffna university conducts a physics lab session on sound waves covering all schools in Jaffna
- Resource allocation / sharing done based on presence, availability, bandwidth, knowledge level, location and range of other data insights.
The platform should provide predictive information as well as historic data analysis in the form of

“With the term 1 results there’s a 60% of risk of failing Mathematics in fishing community covering schools A, B & C”

“Only 40% of schools have covered electronics in Physics and out of them only 20% of students have scored more than 50% in the electronic section”

“There’s a risk of O/L failure rate increasing by 15% if area 1 & area 2 hit by a drought for more than 30 days after August”

After a screening test or based on system data on their performance, the students should be prompted with,

“You are recommend to undertake course 1 in English year 10 library found in path ...../..../ “

“You follow up revision module is available on path.../...../ please complete and submit the assessment end of it to progress to the next module”
5. Discussion Forum (Chat Space) / 6. Reward System

“What is cloud computing? What improvements can bring?”

“You question is forwarded to tutor 1, rank 5th in popularity index who is online, he is available to chat on <username>”

Thanks! Can you recommend video tutorial on Big Data too?

the slides available path < >, I’m available on

My latest video tutorial on Bond Issue Analysis available on </path/..>

Can I have the recommended answer script of 2016 o/L English paper?

I found a solution for the issue facing on video sharing, check this out.

Your solution is accepted, you have earned 12k reward points and 1st level hall of fame

Note that the issue you all faced was solved by <user>..applause !!!

Dear User you have earned 10 reward points

Dear User following web tutorial is recommended to you.
The e-agro platform should promote

- Productivity
- Fair-Trade
- Minimize Wastage
- Efficiency in Industry
- Optimal Resource Utilization
- Ease of Use

The Platform Will Essentially be an eBay Like Trading Platform And An Information Exchange.

The Platform Is Best Explained How Each Stakeholder’s Expectation Are Met.
1. Farmers

- Directly Reach Authorities: Min Price, Buying Points & Complaints on a daily basis
- Advertise Crop, Expected Price & Receive Offers
- Real-Time Notification On Complaint Resolution
- Receive Information On Sellers and Advertisements From Sponsors
- Receive Information On Warehouses and Transport Agents
- Receive Information On Research Institutes And Authorities
- Seek Assistance And Notify About Viral/ Pandemic Threats

Wastage, Delays, Response Time

Fair-Trade, Productivity, Efficiency
2. Private Bulk Buyer / 3. Govt. Buying Points

- Make Offers Directly To Farmers
- Receive Real-Time Information On Market Demand
- Receive Real-Time Information On Market Demand & Trends
- Publish Buying Price, Interested Quantity, Commodity & Spare Storage
- Receive Offers From Retailers
- Reach Transport Companies
- Reach Authorities & Receive Research Data On Quality, Least Cost Transportation

Wastage, Manipulation, Response Time  →  Efficiency, Resource Optimization, Communication
5. Research Institutes

- Equip Farmers With Information Needed To Practice Precision Agriculture
- Implement & Progress Review Of Industry Best Practices
- Respond Fast For Health Related Issues
- Eliminate Pandemics And Viral Attacks Quickly
- Waste Management – Alternative Users For Waste
- Plan Better To Meet Future Demand

**Wastage, Response Time**

**Efficiency, Resource Optimization, Productivity, Management**

**General Public**
- Receive Information On Price Level And Market Upper Limit
- Be Notified On Health Issues And Industry Matters
- Find Closest And Cheapest Retail Outlets
- Reach Authorities

**Sponsors**
Ideally People Interested On Agro Community (i.e. Fertilizer, Seed, Machinery Sellers, Banks and Other Interested Parties)

100% Reach For The Target Community (Run Campaigns, Surveys, Promotions, etc)

Cost, Response Time, Hazard

Efficiency, Resource Optimization, Communication
7. Regulatory Authorities

Use The Platform As A Public Announcement Platform (Farmer, Media, Public, etc)

Have A Better Control Over The Industry And Trading

Action Against Malpractices & Corruption Swiftly

Reach All Stakeholders Directly

Achieve OPEX Savings From Administrative Expenses

Plan & Improve Productivity Of The Industry To Meet Future Demand

Cost, Response Time, Risk

Efficiency, Resource Optimization, Communication, Fair-Trade
9. Sellers

- Reach Target Market Directly
- Receive Feedback On Products & Services
- Run Effective Field Trails
- Service Customers More Efficiently
  - Cost, Response Time,
  - Efficiency, Resource Optimization, Communication
Questions and Suggestions Are Welcomed
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