

1 BestariNet

A Malaysian Experience



PRIME MINISTER'S VISION



*Dato' Sri Haji Mohammad Najib
bin Tun Haji Abdul Razak*

“Malaysia requires a **transformation of its entire education system**, lifting achievement for all students. Make no mistake; this will require an entirely new perspective, so that **students develop skills needed for the 21st century**. Rather than simply adding staff and facilities, there is now a need to understand and improve the dynamics of the teaching and learning process”.

In 1996, the Malaysian government conceptualized the **Smart School Project** to bring ICT into all schools across the country. The vision is to transform the memory based **learning with** a new curriculum that will be complimented by **technology**.

The Malaysian Education Blueprint(2013-2025)

Blueprint establishes a clear sequence of priorities to ensure that the return on investments is optimized in terms of the results that matter most - “student outcomes.”

Main policies for ICT in education

- **ICT is used as an enabler to reduce the digital gap between the schools**
- **Emphasizes the role and function of ICT in education as a teaching and learning tool, as part of a subject, and as a subject by itself.**
- **ICT to increase productivity, efficiency and effectiveness of the management system.**

MAIN CONCERNS

1



Gap in the **access and quality of education** imparted across urban and rural regions

Focus on industrial teaching **rather than ability based learning**



2

3



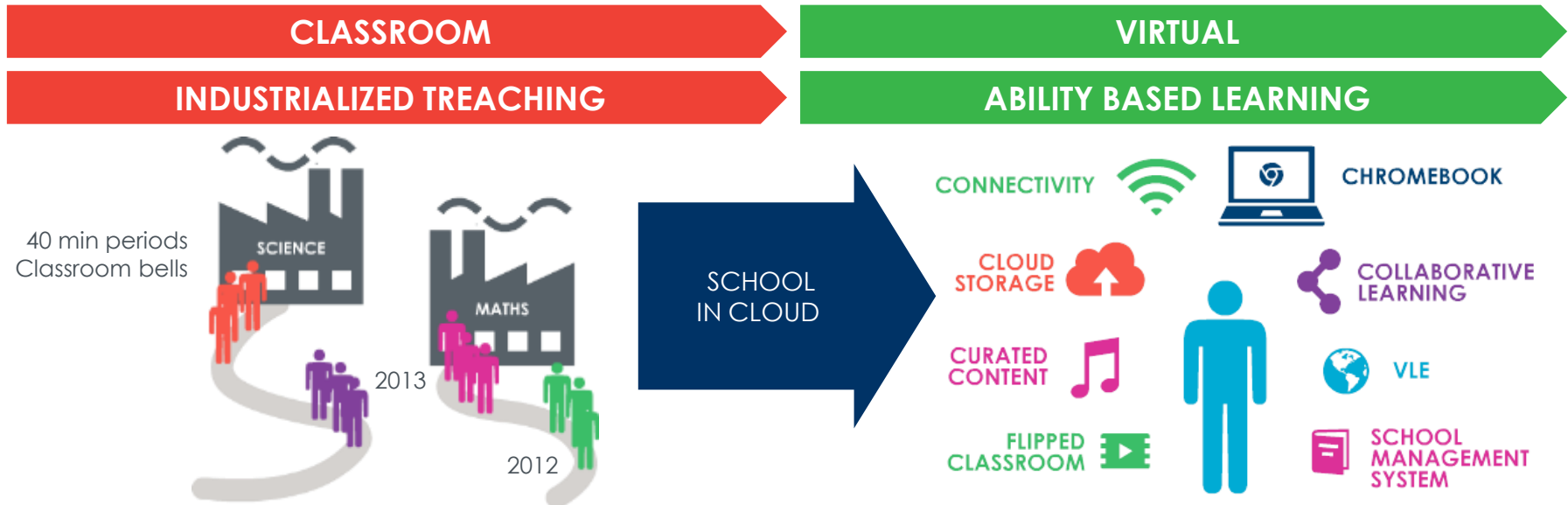
Opaqueness in the system with respect to **governance** of schools, performance of students and teachers and overall quality of education.

Limited infrastructure for access and quality of education for all students



4

1BESTARINET PROJECT



 **MALAYSIA'S 1BESTARINET PROJECT: THE LARGEST PROJECT OF ITS KIND IN THE WORLD**

Enable anywhere anytime learning via cloud



HOW DOES THE EDUCATION COMMUNITY REALIZE THE VISION



Student

- Access to **Formal** and **Informal** learning resources and ensure **Collaboration** and knowledge Sharing
- **Enhancing** delivery of learning resources and materials and **Shifting** focus to Ability-based learning
- **Standardized** and consistent learning platform and **Personalized** form of learning
- Interactive and **Engaging** content provides an incentive to learn and the rich and informative contents that can be accessed **Anywhere Anytime**



Teacher

- Online **Collaboration** and **Knowledge sharing** with other teachers through Interschool teaching platforms
- **Impactful** teaching methods due to proven tools and content for education delivery
- Enable teachers to **Focus** on actual teaching than spending time preparing learning resources
- Flexible support for educators to **Resolve** student **Queries** at all times
- Better **Assessment** approaches

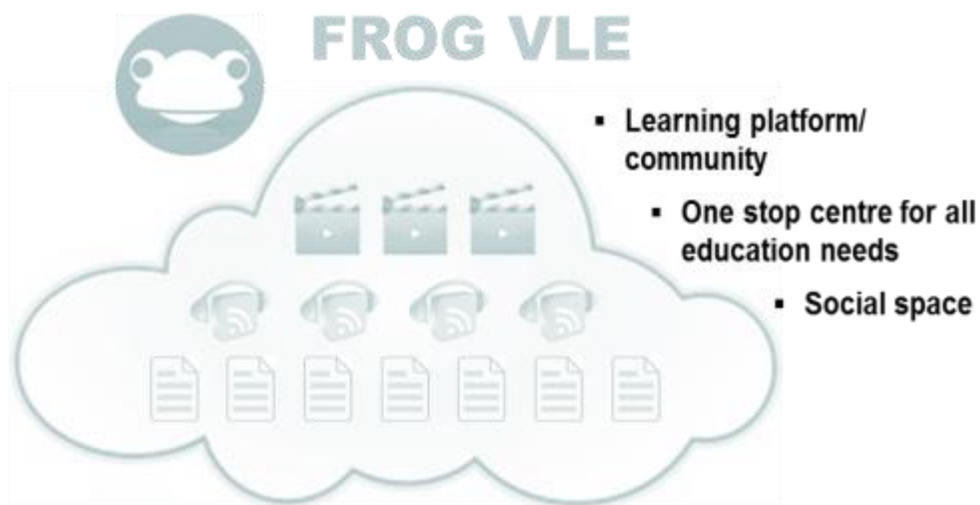


Parent

- Platform for the parents to **Collaborate** with the children and teachers and thus gain continuous **Access** to school updates
- **Informs** parents of their children's progress through regular updates
- Enable parents to gain **Better Visibility** on their children's learning potential and outcomes
- Provides **Easy to use tools** and interfaces for parents to **Access** school and children's learning objectives, curriculum and results

VIRTUAL LEARNING ENVIRONMENT (VLE)

Frog VLE is an interactive learning platform that embeds technology in teaching and learning.



In School: Access and Safety



Access to VLE and high-speed Internet for learning and research, and the built-in content filter provides a safe learning environment

Beyond School: Flexibility and Mobility



Access to VLE via any internet connection, and free access to the VLE on the Yes 4G network anywhere with a VLE login ID.

Single Sign On
1 ID for all
services



Frog VLE



Academic:

- Resources and content creation
- Collaboration and sharing
- Electronic assignments and marking



Communication:

- Notices
- Forums
- Sites



Administration:

- Resource booking
- Calendar



Internet Connectivity & Access



Connectivity: in schools throughout the Yes 4G network



Access: to the VLE from any Internet connection



Single login ID: providing access to the VLE and an e-mail client embedded within the VLE

THE STRATEGY TO ENSURE ADOPTION OF 1BN

Leaders prompt the Domino Effect



20% Targeted Leaders



60% Natural Followers



20% Skeptic Laggards

Leaders Prompt the Domino Effect



20% of selected influential Leaders will set a positive trend for Followers and Laggards

1. Select the **Right Leaders**

- “Friends and family” pilot schools
- Existing system champions
- Parents active in PIBG
- Top scoring students, prefects

2. Provide the **Right Tools**

- Opportunity to participate through Engagement Events
- Channels for open feedback
- Involvement in solution build advisory
- Involvement in marketing material

3. Set the **Positive Narrative**

- Publicize the success
- Create the trend

ENGAGEMENT leads to **SUCCESS**

Mutual recognition
encourages
positive sentiments



A competitive environment
results in winning
together



Interactive learning
promotes peer teaching



Sharing knowledge
to leverage
on benefits



Role Modelling
creates Leadership



Slow Adoption

Negativity

What happens without
engagement?

Confusion

Complaints

Mistrust

The End Result...

disengaged

poor performing

teachers and parents

=

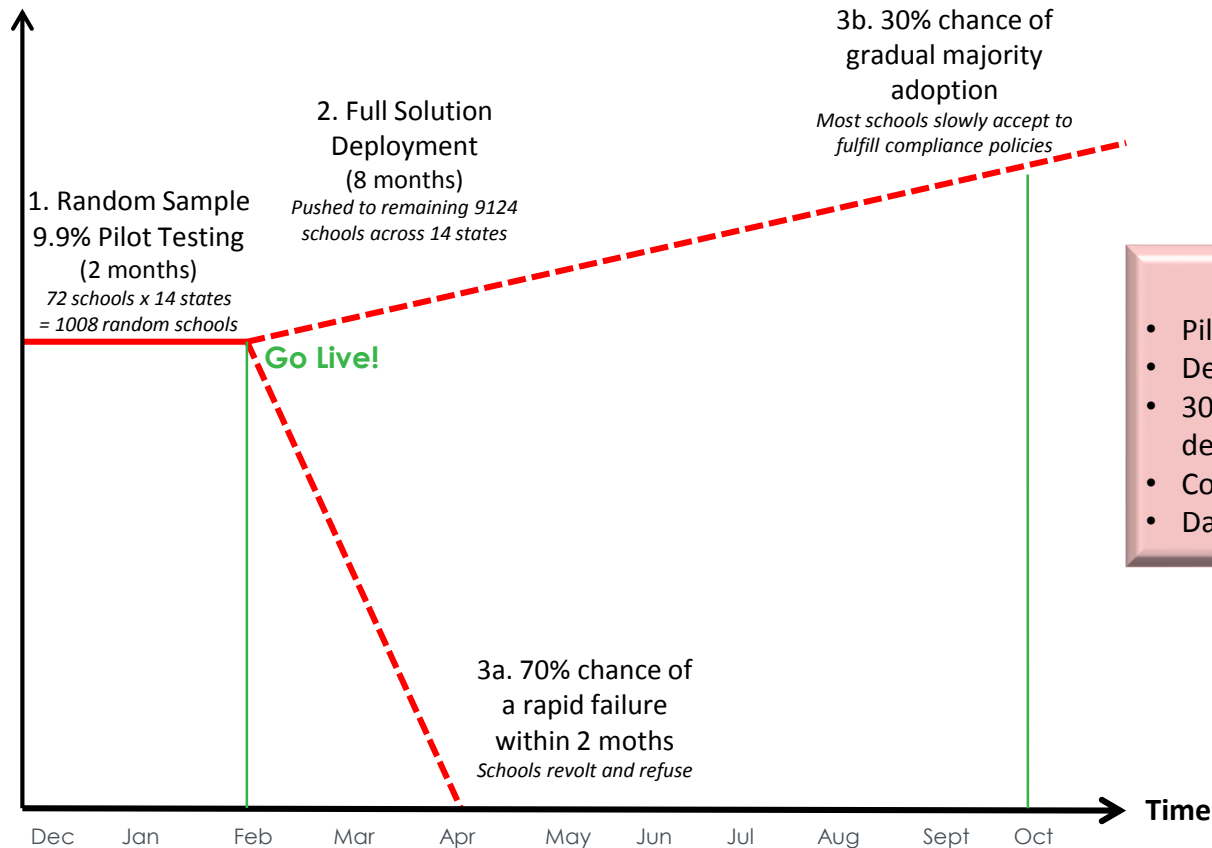
students



THE SMART SCHOOL APPROACH

Ensure **high adoption through a staged approach** to assess the success of each stage so that corrective measures can be taken to improve the overall process. A select group of SMART schools were selected for the pilot testing stage to lead by example and lay down the path for the other schools to follow.

100% Adoption

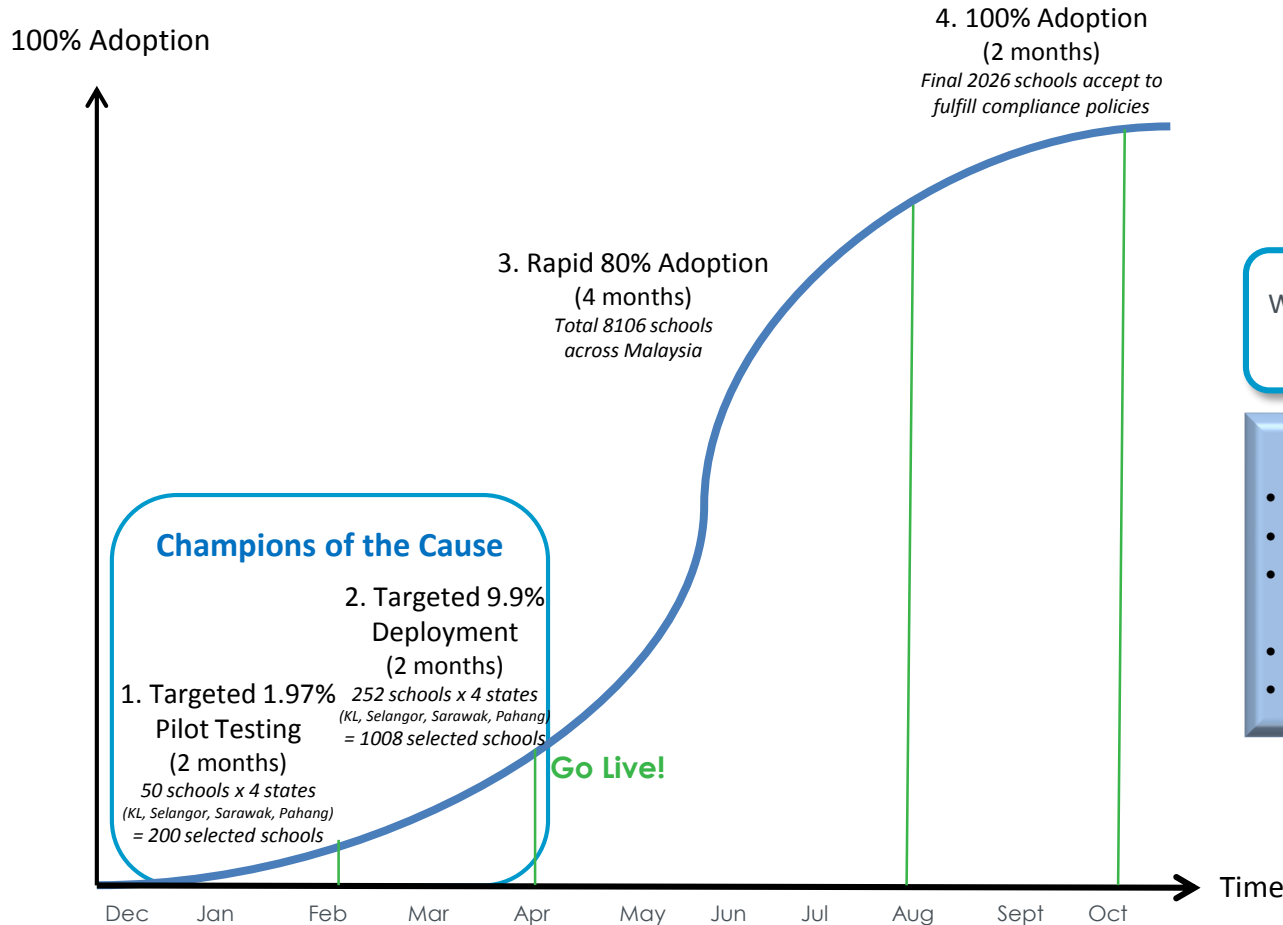


Big Bang "Push" Approach

- Pilot testing with random users
- Developers push the solution to users
- 30% chance success, 70% chance failure, depending on dominant sentiment
- Costly training and compliance measures
- Damage control possibly needed

SETTING THE STAGE FOR SUCCESS

The champions of the cause will eventually have a knock on effect on the other schools and this will **increase the adoption rate at a rapid pace** once all the schools have a chance to see the benefits the new system brings to the SMART Schools.



Champions of the Cause
 When 10% (SMART SCHOOLS) of schools hold an unshakable belief, the other schools will follow their lead.

- Targeted "Pull" Approach**
- "Family and friends" targeted testing
 - Targeted users provide solution input
 - Guaranteed success due to positive sentiments from the start
 - Demand generated for rapid adoption
 - Sunken cost savings

SUSTAINING SUCCESS



20% Leaders



60% Followers



20% Laggards

Tipping Point

At the 20% adoption mark, transformation gains enough traction to rapidly take off and gain critical mass.

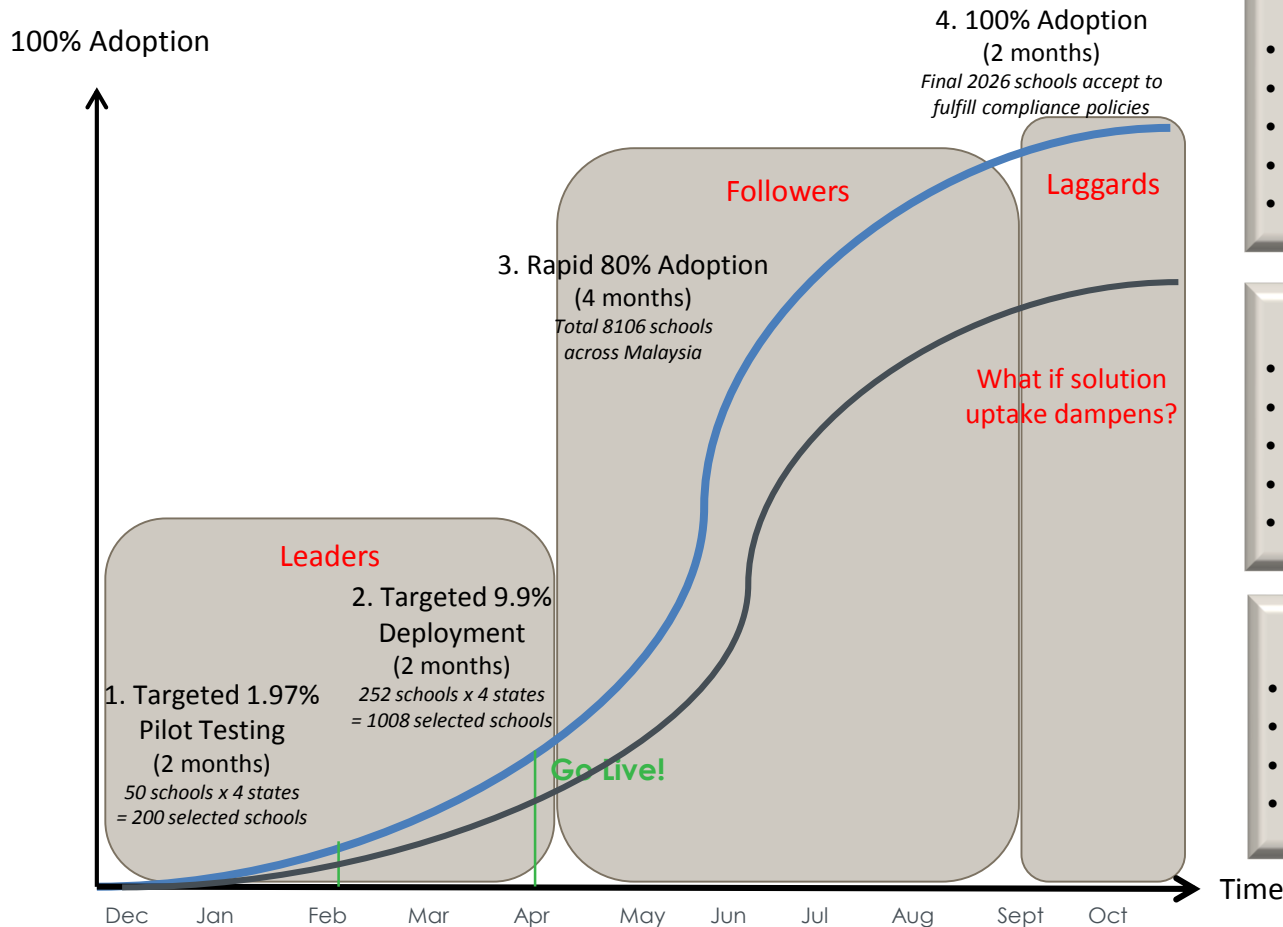


Incentivize Followers to sustain momentum

- Recognition and rewards
- Positive reinforcement
- Role modelling
- Competitions and winners

RESOLVING SLOW MOMENTUM

Capitalizing on Engagement Triggers



Leaders Engagement Triggers

- Gamification opportunity
- Top 20% congratulatory message
- Sneak Peak Week messages
- Marketing material involvement invite
- Online engagement forums

Followers Engagement Triggers

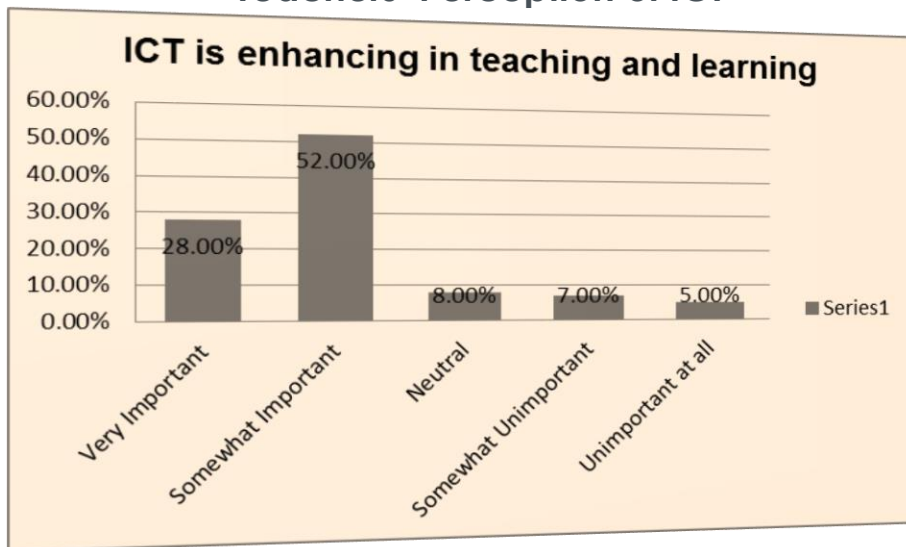
- Chat channels and alerts
- Personal performance KPI versus peers
- Text alerts for attendance, grades
- Competitions and promotions
- System-automated messages

Laggards Compliance Triggers

- Surat Pekeliling from JPN
- Non-compliance peer statistics
- Reminders from Pengetua
- Name and shame technique

MOE TEACHERS' PERCEPTION OF ICT

Teachers' Perception of ICT



- ✓ **85%** of MOE teachers indicated that they would like to integrate more computer applications into their teaching.
- ✓ Teachers' **perceptions** towards ICTs are **encouraging**.
- ✓ Teachers are **positive** towards further **integration of technologies** into classroom instruction.

Benefits:

- ✓ ICT has motivated students in their learning by bringing **variety into the lessons**
- ✓ ICT has sustained teachers' own **interest in teaching**.

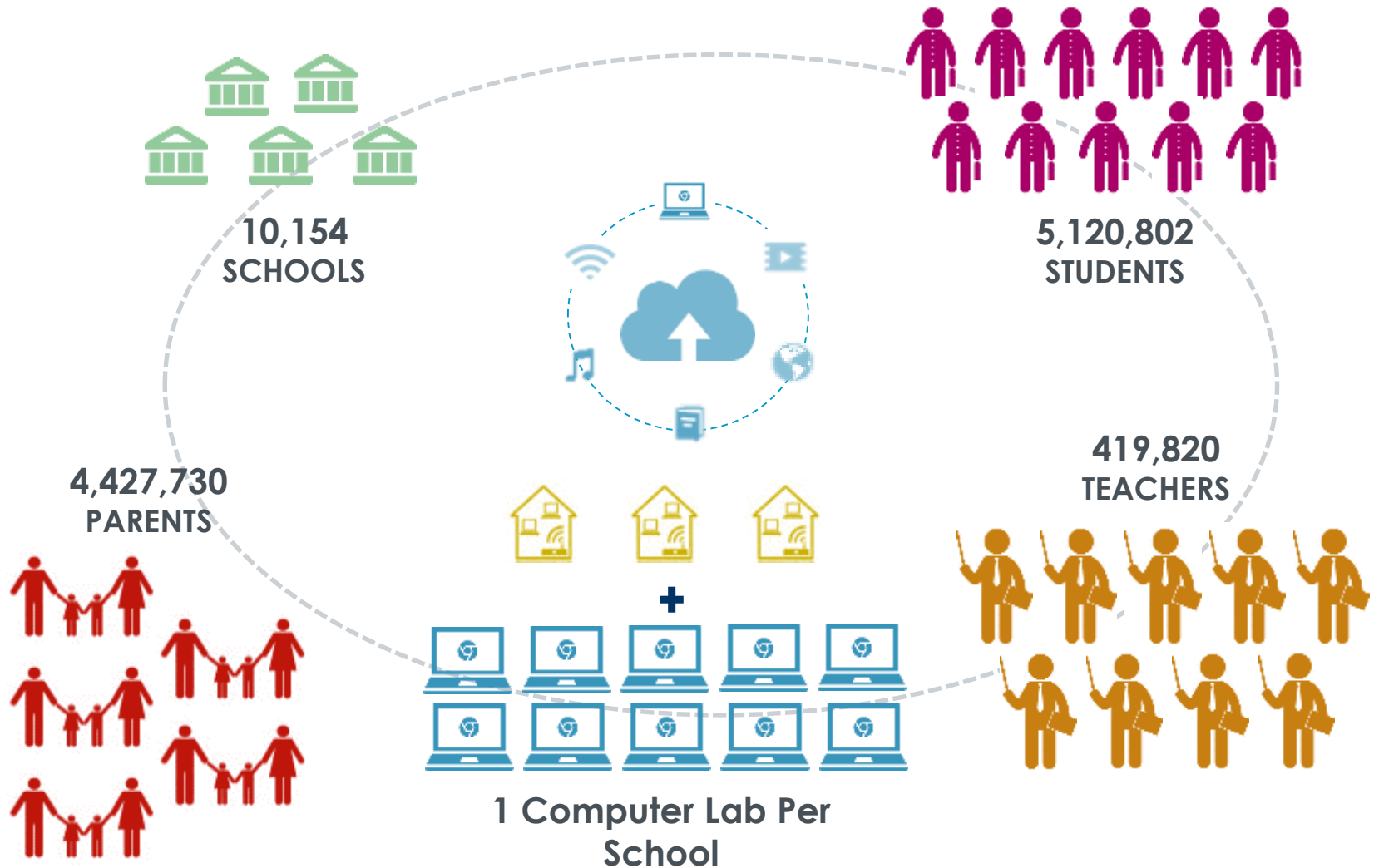
Malaysia Education Cloud – Frog Store

- 1) More than 5 applications developed in the FrogStore and 9 more are in development phase
- 2) More than 100 books got digitized
- 3) Sharing – Sharing of Frog Sites through FrogStore
- 4) Rich media - Support eBooks, images, videos, applications, Frog Sites, SCORM

Source :EXPLORING THE EXTENT OF ICT ADOPTION AMONG SECONDARY SCHOOL TEACHERS IN MALAYSIA

1 BESTARINET RESULTS

Single educational network nation wide



SUCCESS MONITORING

SCHOOL ONLINE STATUS

UPDATED: 12 SEP 2014, 8:00AM

9889

TOTAL OF SCHOOLS

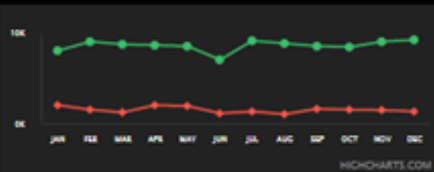


Online/Offline count of all schools installed

Online/Offline percentage of all schools installed

One month average online/offline count of zooms at this point of time

TREND



CPE ONLINE STATUS

UPDATED: 12 SEP 2014, 8:00AM

24,194

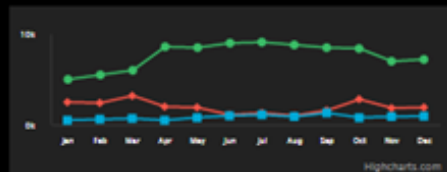
TOTAL OF CPES DEPLOYED

ZOOM	Schools	Percentage
0-1	129	1.2%
1-2	1,203	68.8%
2-3	3,574	24.6%
3-4	2,744	13.4%
VSAT	855	3%
ADSL	431	3.1%

Count of online school categorised based on number of CPES online in each school

Percentage of online school categorised based on number of CPES online in each school

TREND



CPE SPEED

MONTHLY UPDATE: 01 SEP 2014, 8:00AM

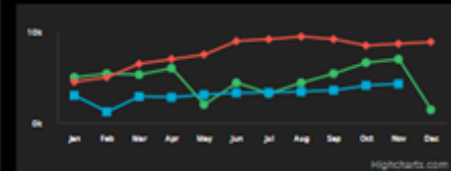
345

SCHOOLS' NETWORK SPEED < 4MBPS

Speed Range	Schools	Avg. Speed
0-1 MBPS	13	0.511MBPS
1-2 MBPS	114	1.671MBPS
2-3 MBPS	542	2.221MBPS
3-4 MBPS	432	3.871MBPS
> 4 MBPS	8,918	8.911MBPS

Count of schools where zoom speed is less than 4 MBPS (updated on monthly basis)

TREND



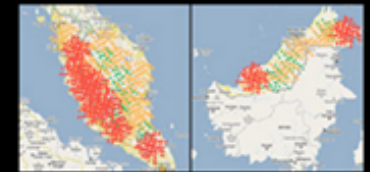
DATA USAGE

MONTHLY UPDATE: 01 SEP 2014, 8:00AM

145,898 GB

OF DATA CONSUMED BY 10,210 SCHOOLS

BASE STATIONS SCHOOLS

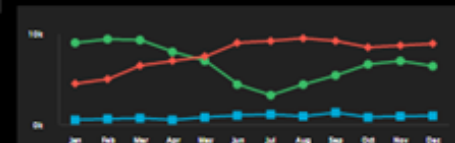


LOW	MID	HIGH
3,891 SCHOOLS 0-40GB	3,891 SCHOOLS 41-100GB	3,892 SCHOOLS 100-200GB

Count of school with high bandwidth usage

Count of base stations with high usage

TREND



WHAT 1BN HAS DONE TO OVERCOME THE CHALLENGES

The strategy below provides a snapshot of how the challenges outlined are addressed

Eliminate rural-urban divide and provide access to quality education for everyone through:

- Connectivity
- Open Learning Platform
- Centralizing IT in Education
- Cost Effective Devices



Replace industrialized teaching by ability based learning by:

- Enable self-paced learning
- 24/7 access to rich, multimedia learning material
- Learning platform that supports different learning types
- Supporting system for teachers
 - Enable collaboration



Transformation

Change the economics of education to enable efficient and effective transformation

- Make every home a classroom
- Centralize content development
- Off-load costs through crowd sourced content curation
- Replace hard copies by e-books



Increase transparency to improve governance using:

- Multi-tiered monitoring
- Software enabled auditing
- Centralized School Management System
- Enable parents to track students' activities and results



WHAT DOES THE TRANSFORMATION INCLUDE?



Cost Efficient and Quality Regulated System

- **Enabling** a Virtual Learning Environment
- **Standardize** the learning platform in all schools thereby enhancing quality of imparted education
- **Education community** for schools to leverage and share the best standards



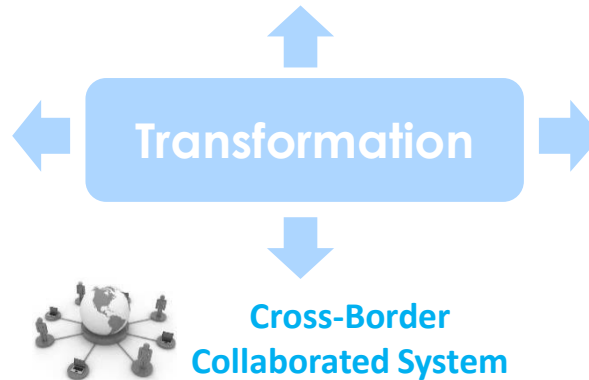
Centralized Cloud-Based Platform

- **Centralized** School Management System
- **Empowering** the ministry to effectively monitor and manage the schools
- **Framework** for collaboration
- **Platform** for centralized learner-generated content



Self Sustaining Ecosystem

- **Collaborating** to form a secure education community with students, teachers and parents
- **Sharing** the best contents Engaging parents in the students educational journey
- **Enabling** Teachers to collaborate and exchange ideas
- **Empowering** Students to target limitless boundaries of knowledge



- **Enable collaboration** across all schools
- **Use curated content** and the same learning platform to share the best resources for education