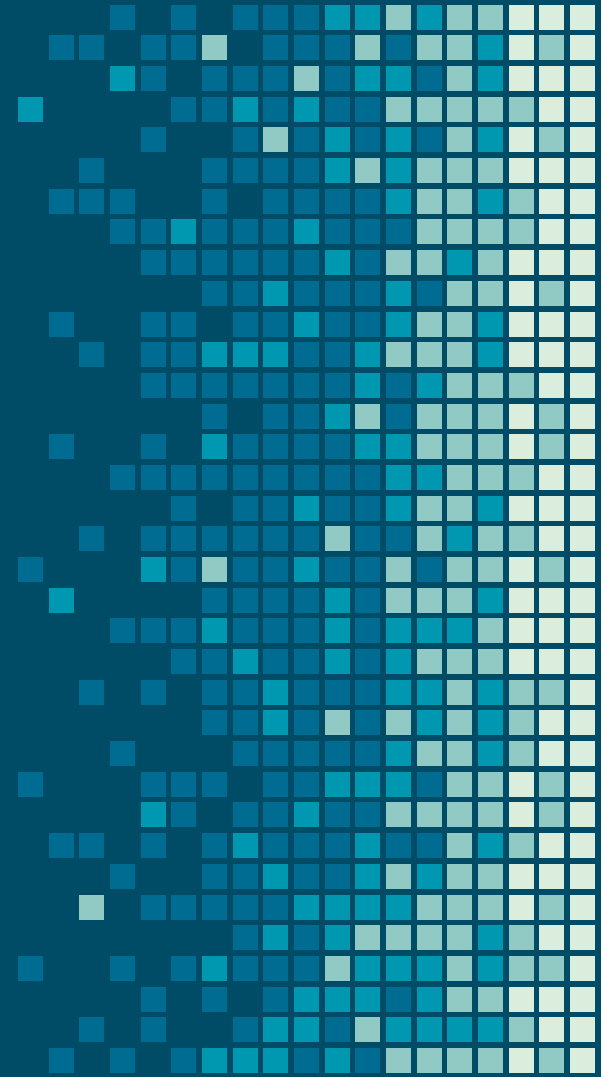


ESSENTIAL TECHNOLOGY IN PUPIL TRANSPORTATION

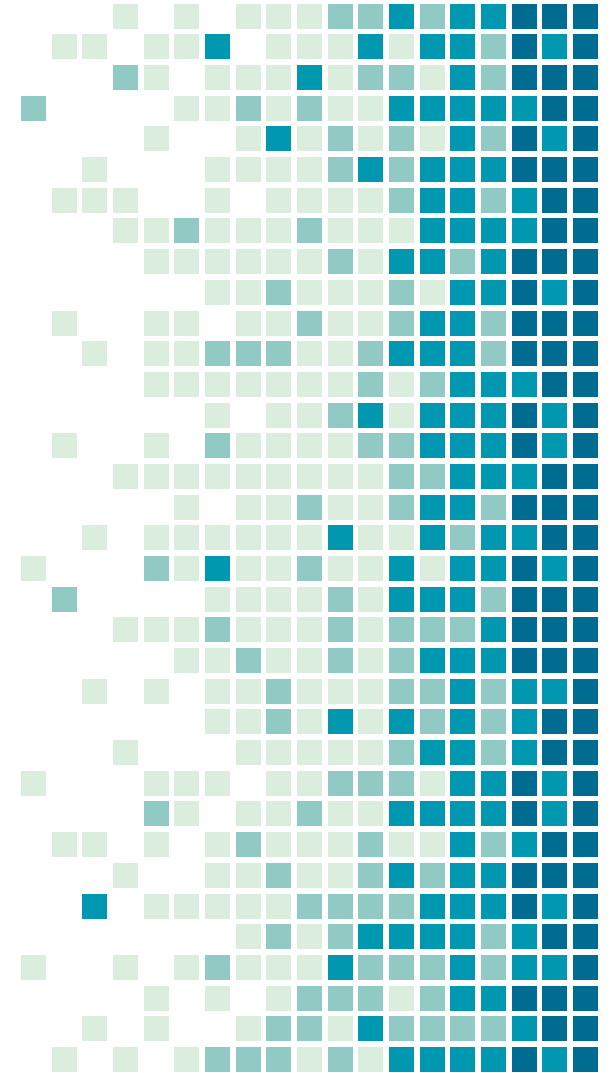
PRESENTED BY:

Patrick Gallagher
Director of Sales & Operations
SafeStop, Inc.



1. INPUTS

What information can we collect?



DATA AVAILABLE

GPS Systems

Through hardware installed on the bus, track the location and health of the vehicle in real time and historically.

Cameras

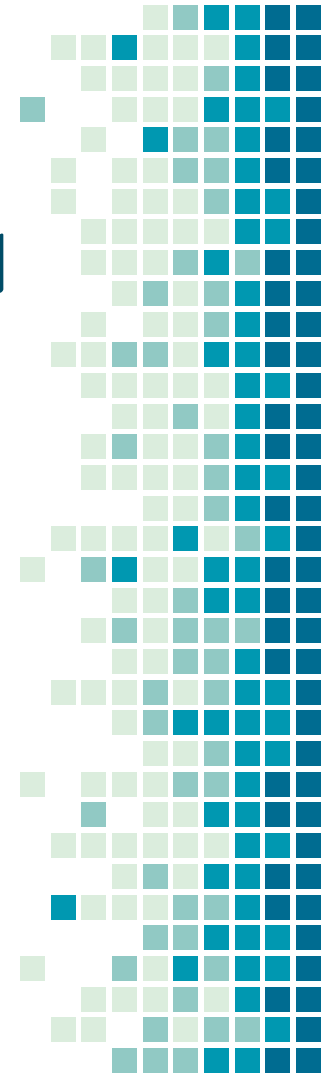
View what occurs in and around your vehicle while it performs its route.

Routes / Routing Systems

Create your fleet's operating plan using a set of unique parameters and conditions you create.

Child Check

Ensure your drivers are completing their post-trip inspection for remaining children.



DATA AVAILABLE

EVIR Kits

Ensure drivers complete their pre-trip inspection by visiting designated zones and scanning a device.

Driver Credentialing / Payroll Systems

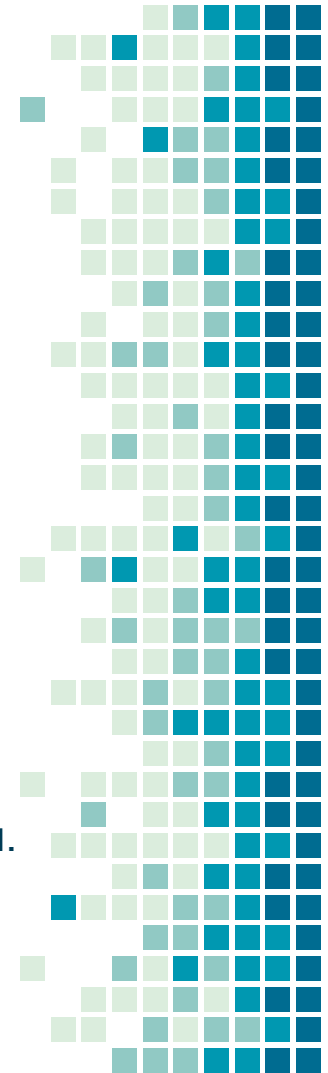
Manage and track driver files, weekly hours, activity, payment, and other important records for personnel.

RFID / Student Scanning

Track ridership on each vehicle and create a trail of activity for each student.

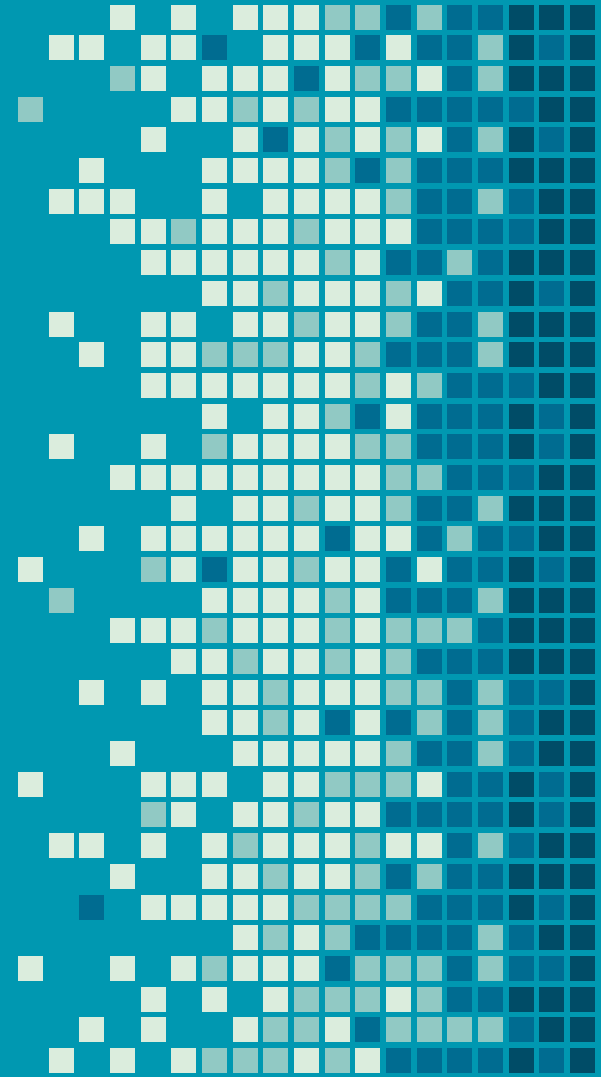
AND MORE!

Everything from maintenance to student management to incident reporting software is available for you.



“ It’s difficult to imagine
the power that you’re
going to have when so
many different sorts of
data are available.

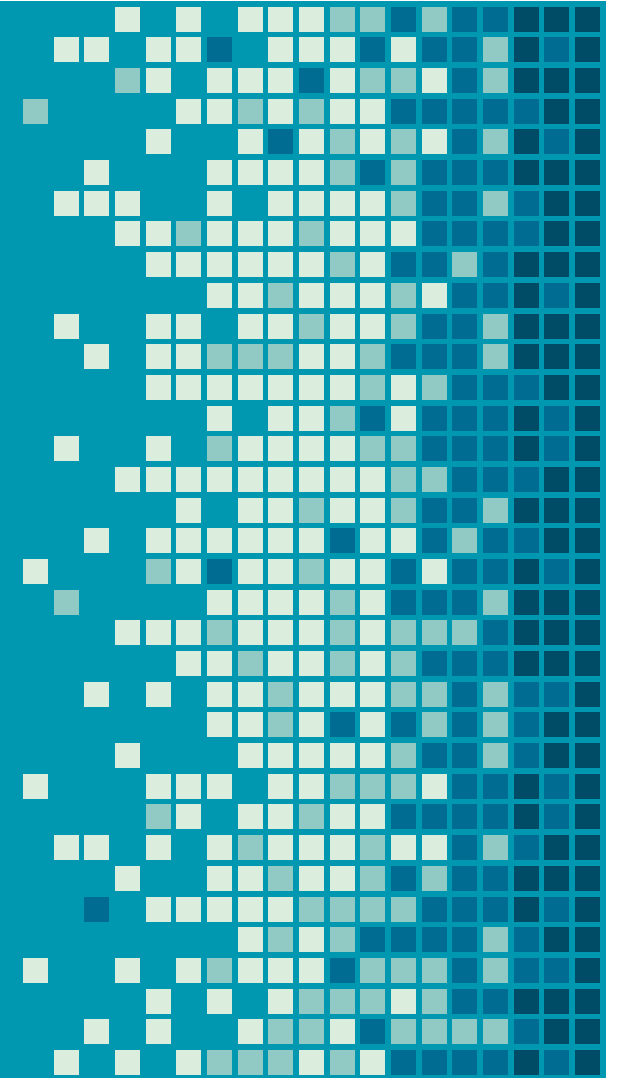
- Tim Berners-Lee
Inventor of the World Wide Web



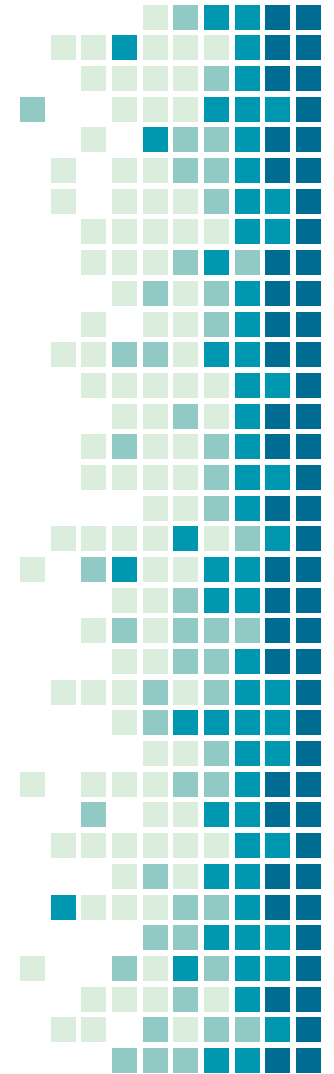
“ *Never confuse motion
with action.*

- Benjamin Franklin

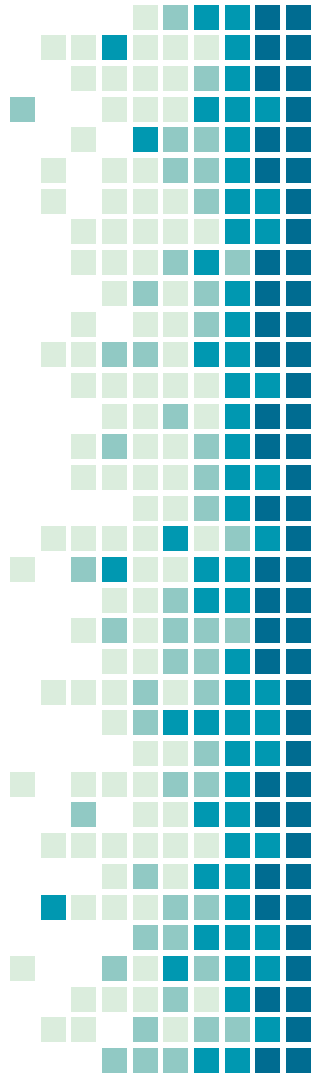
Inventor of a lot of things



IN THEORY, IT'S SIMPLE.

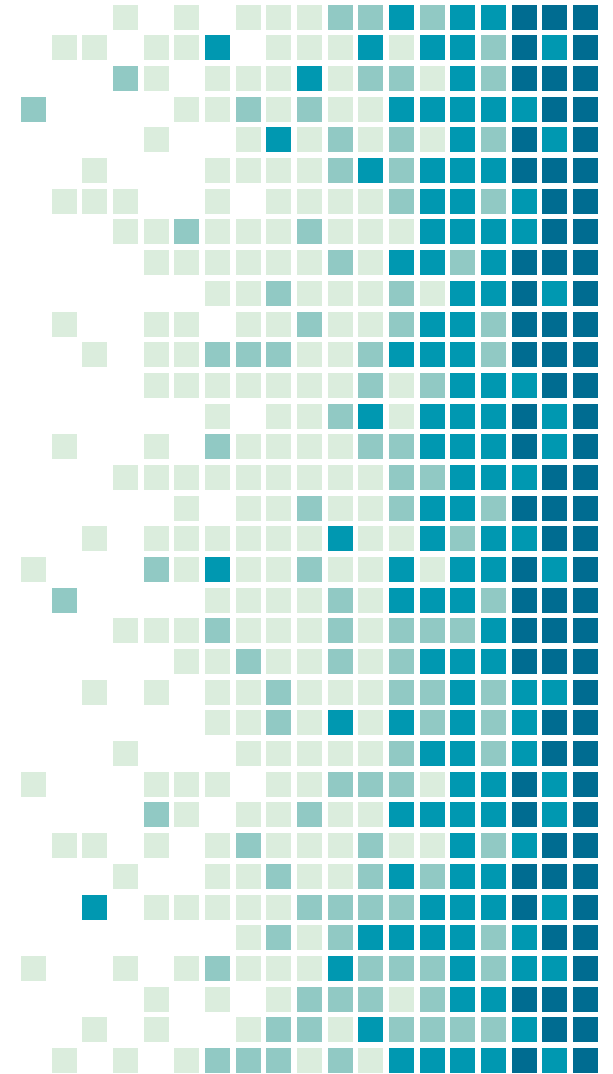


IN REALITY,
IT'S QUITE DIFFICULT.



2. OUTPUTS

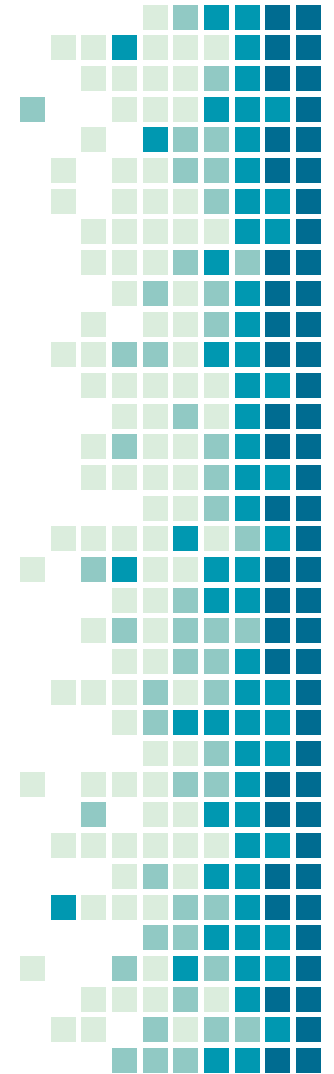
What information is available and what are some of the roadblocks?



QUANTITY OF DATA

- Over 1,000,000+ data points created per day
- Multiple systems interacting with one another
- Multiple stakeholders using that data

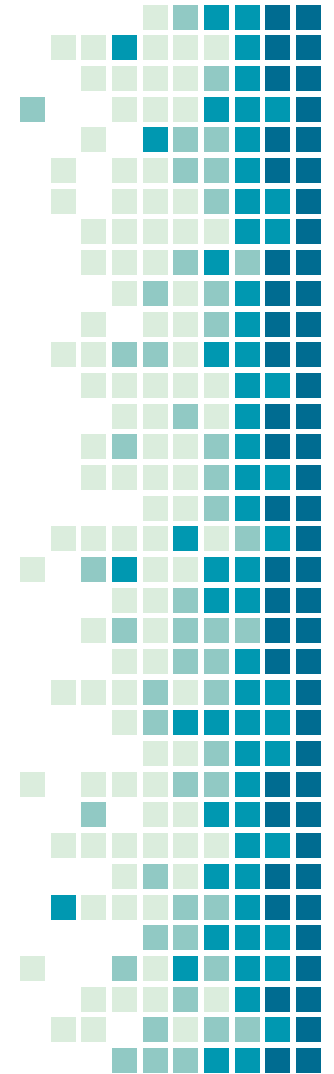
The quantity of data is easily overwhelming. **So *how do you make it manageable?***



QUALITY OF DATA

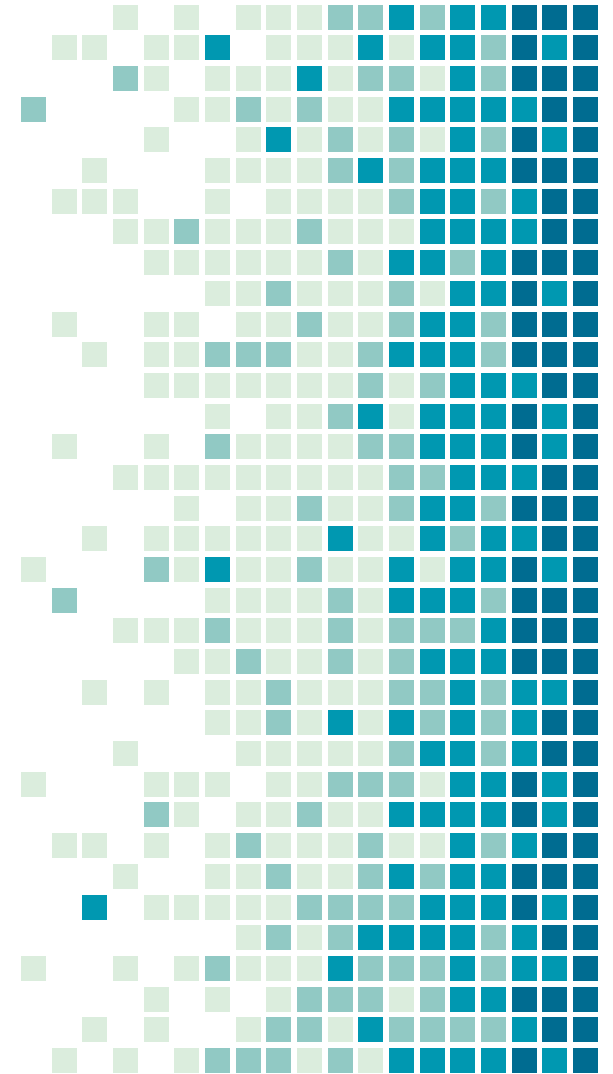
- Route deviations and bus assignments
- Humans cutting corners
- And other exceptions to the “rules” set by your data collection systems

The quality of the data can easily become poor.
How do you ensure the data is useable?

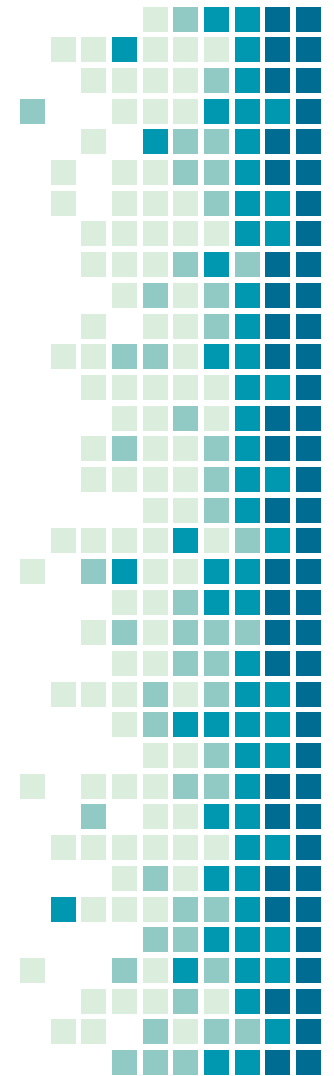
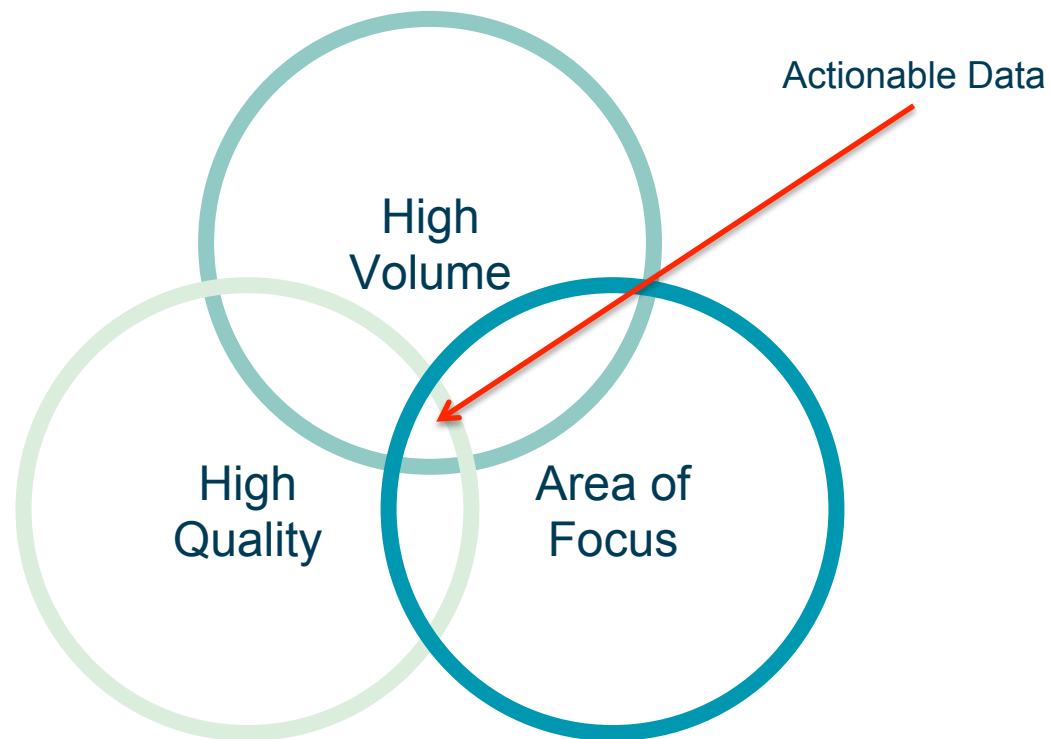


3. ANALYSIS

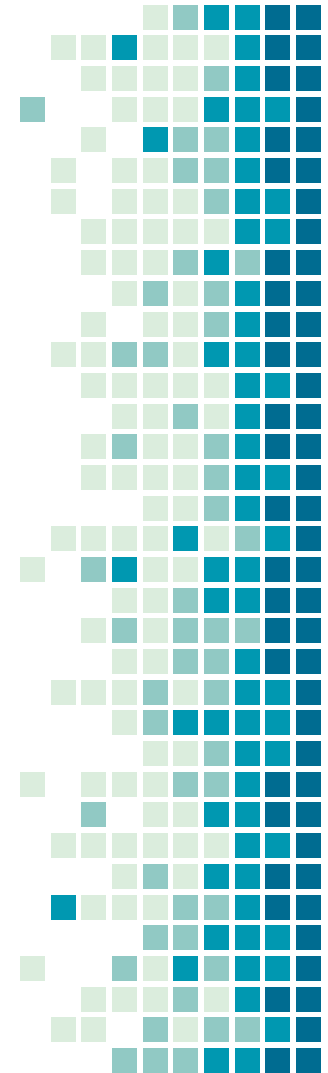
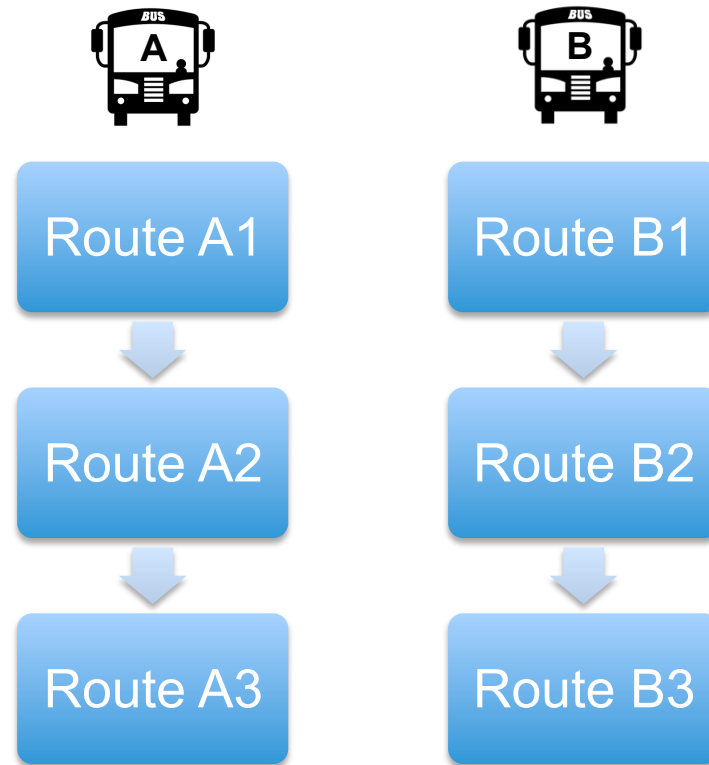
What information is available to us?



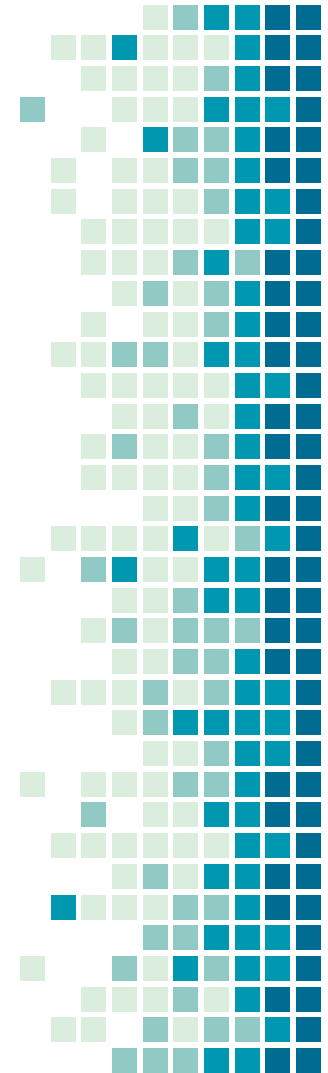
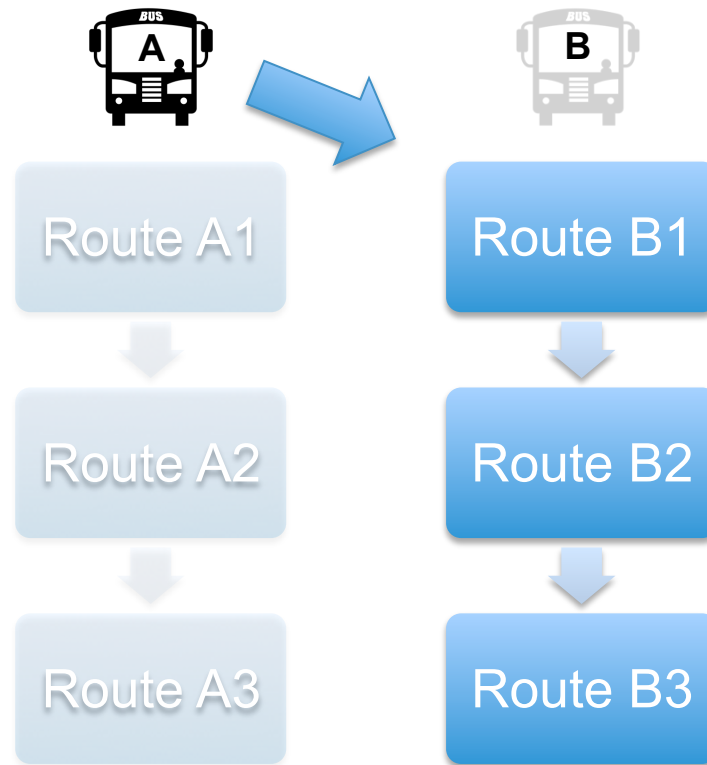
WHAT NEEDS TO HAPPEN?



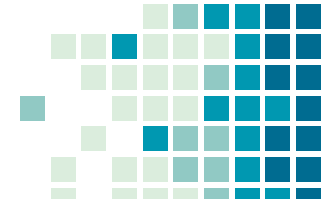
CASE STUDY: SAFESTOP



CASE STUDY: SAFESTOP



CASE STUDY: SAFESTOP



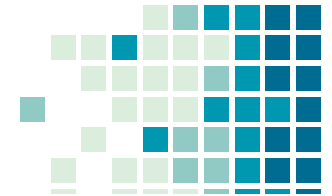
Driven Route Camacho 281 Am

Bus	Start Date	Start Time	End Date	End Time
281	04/05/2018	06:32:59AM	04/05/2018	07:18:00AM

Activity				
Stop	Scheduled Time	Actual Time	Difference	
Camacho Elementary	07:20AM	07:18AM	00:02:12	
Mason St & Northern Trl	07:14AM	07:15AM	00:00:59	
515 Bent Wood Dr	07:13AM	07:14AM	00:00:50	
Northern Trl & Teal Ln	07:12AM	07:13AM	00:01:07	
Eagles Way & Northern Trl	07:11AM	07:12AM	00:00:56	
Moon Glow Dr Just Passed Mailboxes	07:10AM	07:11AM	00:01:03	
Topaz Ln & Woodduck Trl	07:09AM	07:10AM	00:01:30	
Canvasback Crk Dr & Topaz Ln & Canvasback Crk Dr	07:08AM	07:09AM	00:01:01	
Embden Trl & Kaluga Trl	07:08AM	07:07AM	00:00:06	
924 Canvasback Crk Dr	07:07AM	07:06AM	00:00:04	



CASE STUDY: SAFESTOP



Driven Route Camacho 281 Am

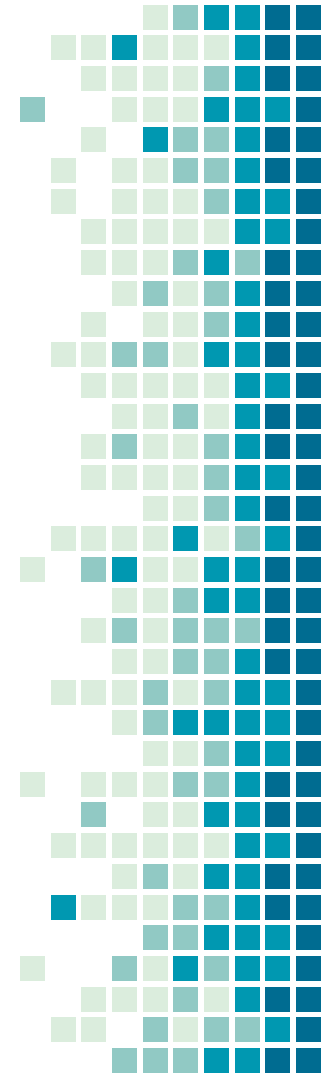
Bus	Start Date	Start Time	End Date	End Time
281	03/30/2018	06:13:56AM	03/30/2018	02:22:01PM

Activity			
Stop	Scheduled Time	Actual Time	Difference
Camacho Elementary	07:20AM	GPS Skip	-
Mason St & Northern Trl	07:14AM	GPS Skip	-
515 Bent Wood Dr	07:13AM	GPS Skip	-
Northern Trl & Teal Ln	07:12AM	GPS Skip	-
Eagles Way & Northern Trl	07:11AM	GPS Skip	-
Moon Glow Dr Just Passed Mailboxes	07:10AM	GPS Skip	-
Topaz Ln & Woodduck Trl	07:09AM	GPS Skip	-
Canvasback Crk Dr & Topaz Ln & Canvasback Crk Dr	07:08AM	GPS Skip	-
Embden Trl & Kaluga Trl	07:08AM	GPS Skip	-
924 Canvasback Crk Dr	07:07AM	GPS Skip	-



OTHER SCENARIOS

- Camera hasn't functioned in weeks
- Driver presses Child Check button but doesn't look in bus
- Routers struggling to keep up with changes inside routing system
- Students regularly forget scan cards



HOW TO BEST USE INCOMING DATA

Establish Priority

Don't be afraid to focus on certain systems and ignore others. Focusing on one is better than "skimming" over many.

Create Connections

How do your systems talk to one another? Planned vs. Actual or Baseline vs. Improvement.

*****Choose vendors that integrate well!***

Find Bottlenecks

Where is your data becoming poor or inaccurate?

Be Open

Don't force the data to tell the story you want. You might misinterpret or completely miss certain takeaways.

Set A Range/Time

How long will you be focusing on a specific priority? Stick to it.

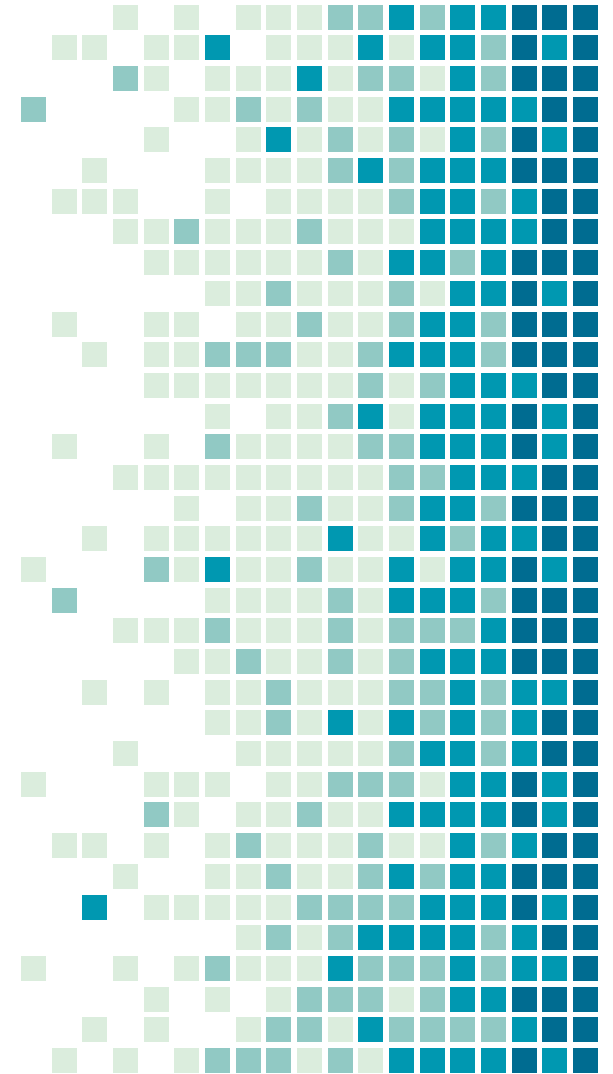
Build Up and Out

Start small and acquire tools that integrate well and create a more complete picture to accomplish your goals.



3. ESSENTIALS

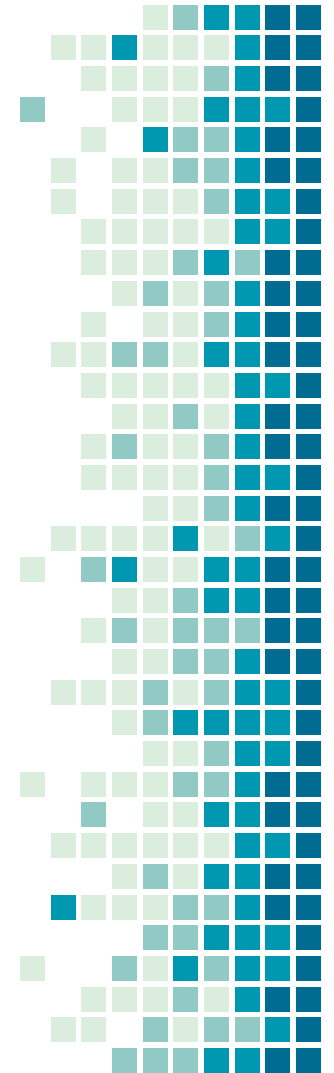
What is essential for you?



ESSENTIAL TECHNOLOGY

- Can it pay for itself?
- Can it save you time vs. add more time?
- Do you feel confident your staff can manage it?

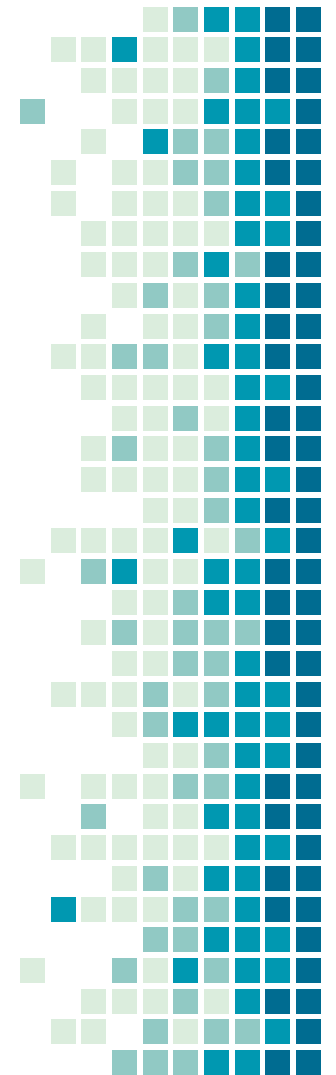
If all 3 are YES, then it is essential. Why?



ESSENTIAL TECHNOLOGY

- Budgets are getting tighter.
- “More time” is always our customers’ #1 wish
- More is being expected of transportation professionals (technical skills)

Consider the HR implication around new technology - developing / hiring around skills.



THANKS!

Any questions?

You can find me at:

pgallagher@SafeStopApp.com

