

ADVANCES IN DIAGNOSTICS IS ABOUT DATA

Source: <https://www.who.int/news-room/photo-gallery/2019/04/04>

DR. RICHARD A. FRENCH

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WE ALL HAVE A COMMON GOAL — PROFIT

WHAT FACTORS AFFECT PORK PRODUCTION AND IMPACT PORK GROSS MARGINS

1. P = $\frac{P}{Q}$ // $\frac{Q}{P}$ ✓

2. S = $\frac{S}{Q}$ ✓

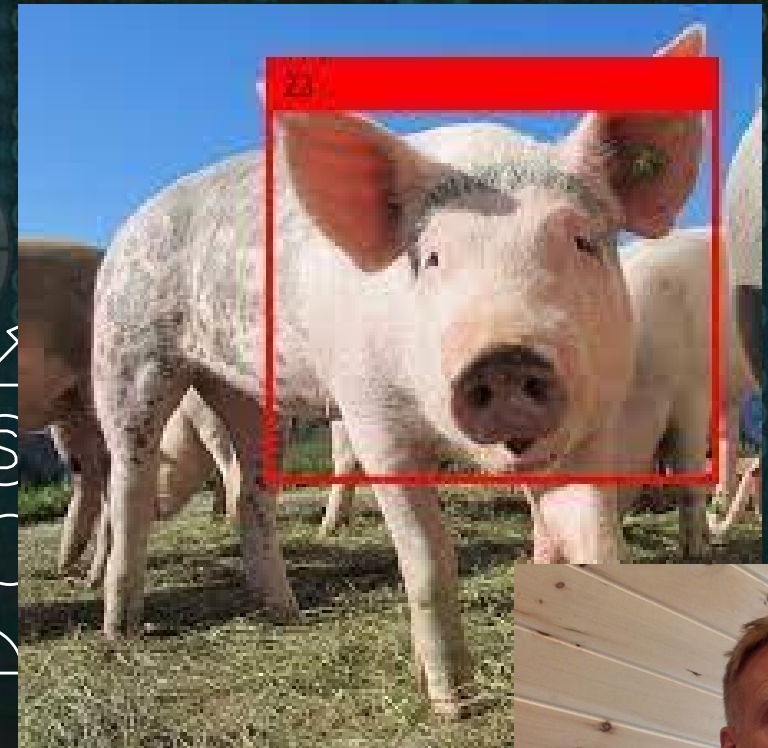
$P \times Q = \frac{P}{Q} \times Q = P$
 $\frac{P}{Q} \times Q = P$

3. L = $\frac{L}{Q}$ // $\frac{Q}{L}$ ✓

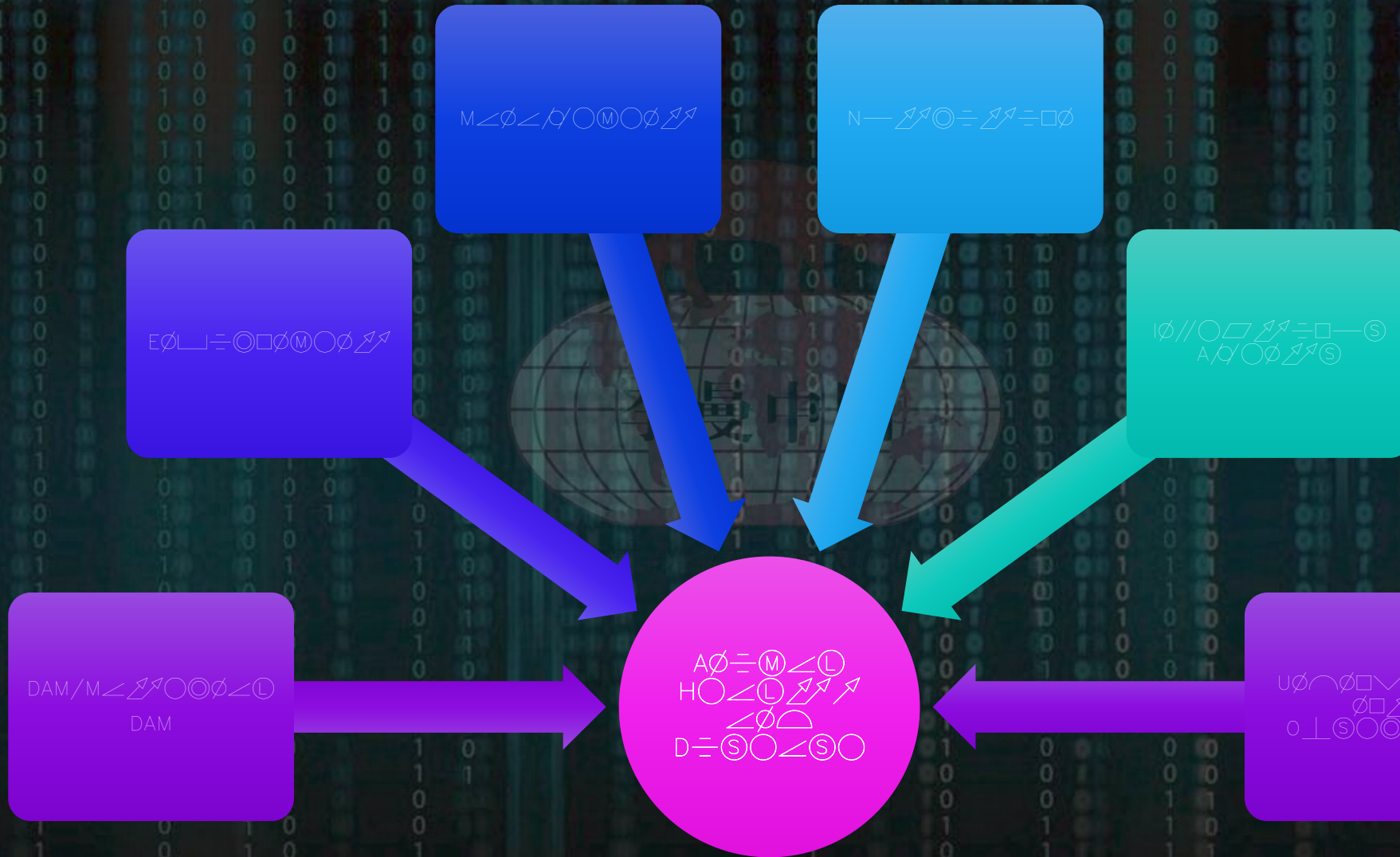
4. F = $\frac{F}{Q}$ // $\frac{Q}{F}$ ✓

$\frac{F}{Q} \times Q = F$

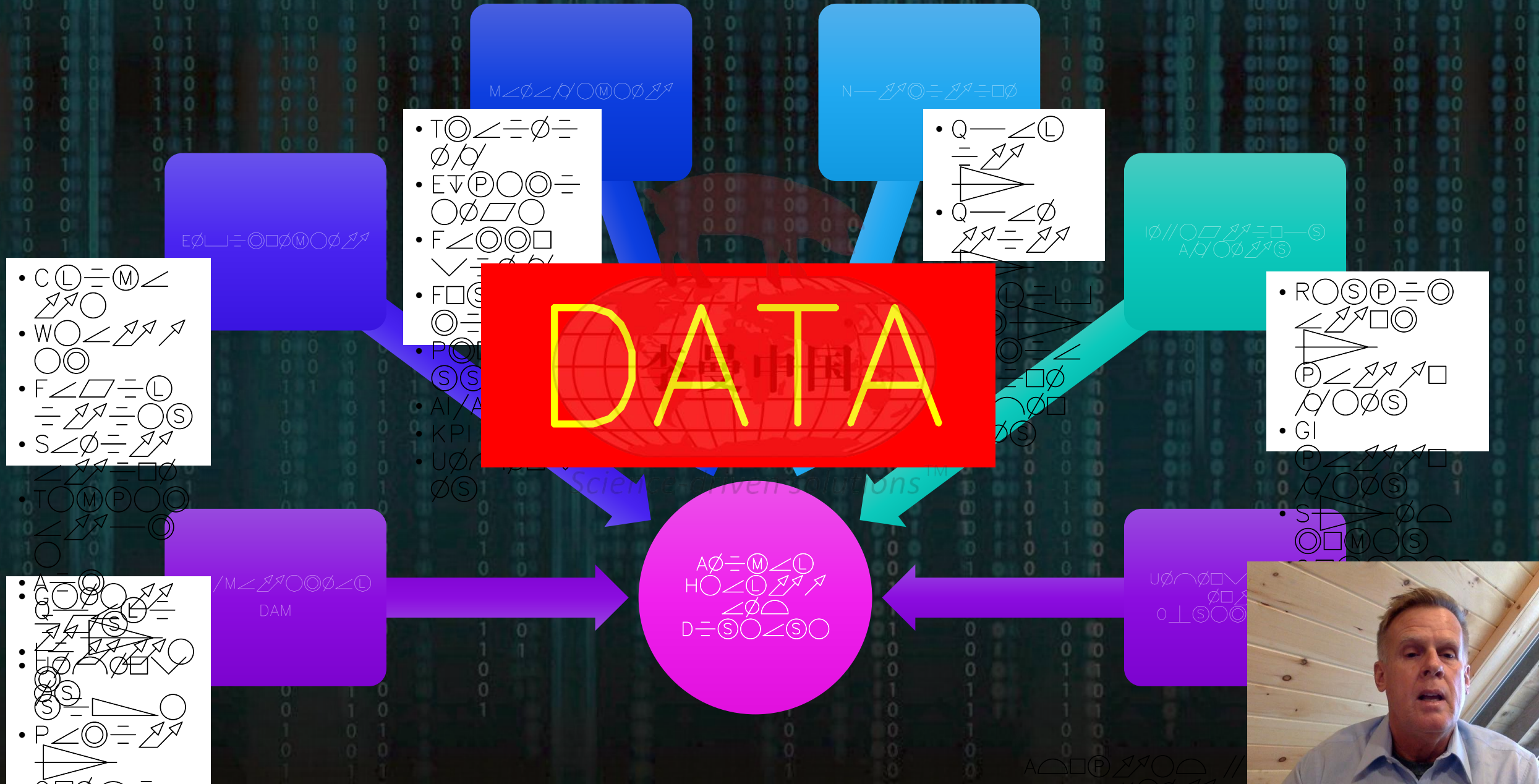
5. L = $\frac{L}{Q}$ // $\frac{Q}{L}$ ✓

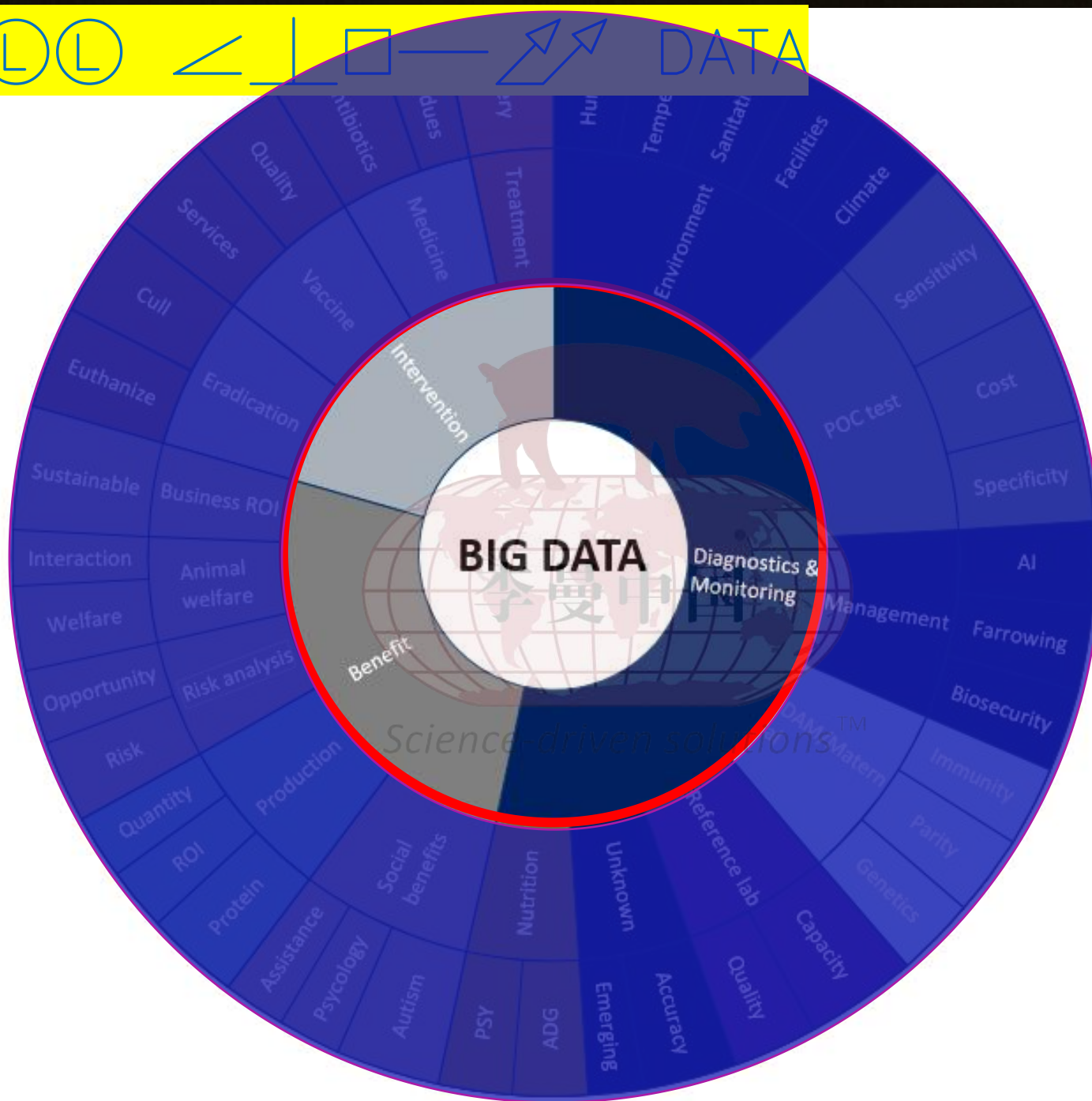


AND HEALTH



AND HEALTH





DATA IS
MONEY



Science-driven solutions

Forbes

INNOVATION

In The Digital Age, Our Data Is Currency

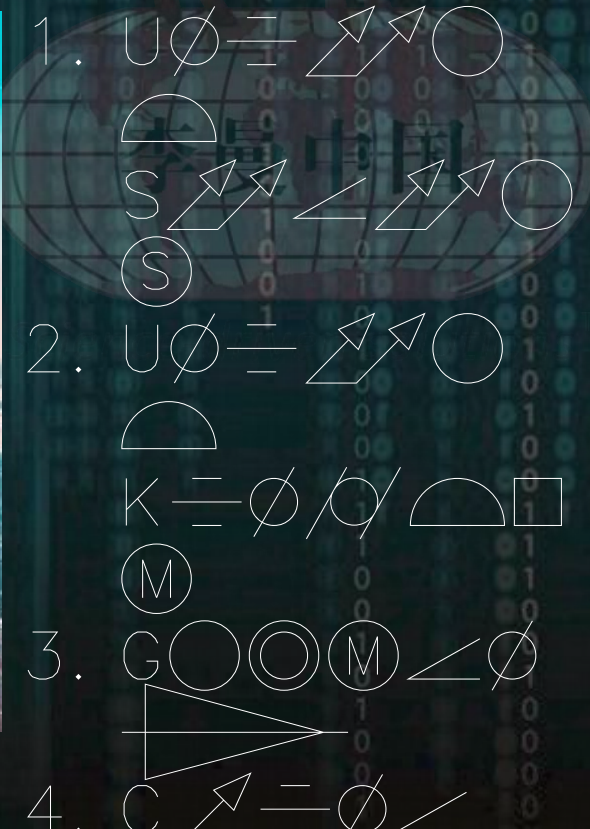


Danny Pehar Forbes Councils Member
Forbes Technology Council
COUNCIL POST | Membership (Fee-Based)



DataCentre.

By India Berry



HOW HAVE DIAGNOSTICS ADVANCED

1. S○◎□L□/p/△
 1. F—(L)(L)△
 - △—△△□(M)△△△○△
 - (S)△△△(S)△△△(M)(S)
 2. B○□△△○○
 - △(P)(P)L=△△△△=□
 - ∅(S)
2. M□L○△—L△◎:
 1. L○(S)(S)
 - ▽P○∅(S)=L□○
 2. F△(S)△△△
 3. F—(L)(L)△
 - △—△△□(M)△△△○△
 - (S)△△△(S)△△△(M)(S)
 4. B○□△△○○
 - △(P)(P)L=△△△△=□
 - ∅(S)
 5. POC
3. S○⋈—○∅△=∅/p/
 1. P○∅—(S)=△○
 - (S)○⋈—○∅△=∅/p/
 2. P△△△△△△△△

A CHINESE COMPANY UNVEILS A POWERFUL NEW SEQUENCER.





$BGI \quad G \circ \emptyset \square M \equiv \square S \equiv S \quad \nearrow \nearrow \circ \quad \vee \square \odot L \triangle ' S$
 $L \circ \angle \triangle \equiv \emptyset / \quad P \odot \square L \equiv \triangle \circ \odot \quad \square //$
 $/ \circ \emptyset \square M \equiv \square \quad S \circ \updownarrow - \circ \emptyset \square \equiv \emptyset /$
 $S \circ \odot L \equiv \square \circ S \quad \angle \emptyset \triangle \quad P \odot \square \nearrow \circ \square M \equiv \square$
 $S \circ \odot L \equiv \square \circ S$

- 6000 $E M (P L \square \rightrightarrows \circ \circ S)$
- $G L \square \perp \angle L$ HQ: $S \nearrow \circ \emptyset \searrow \nearrow \circ \emptyset, \quad C \nearrow \equiv \emptyset \angle$
- $R \circ / \equiv \square \emptyset \angle L$ HQS: $E - \odot \square P \circ$:
 $C \square P \circ \emptyset \nearrow \angle / \circ \emptyset, \quad D \circ \emptyset M \angle \odot \cap \quad A S \equiv \angle$
 $P \angle \square \equiv // \equiv \square: \quad H \square \emptyset / \quad K \square \emptyset / , \quad C \nearrow \equiv \emptyset \angle$
 $A M \odot \odot \equiv \square \angle S: \quad S \angle \emptyset \quad \square \square S \circ \quad CA \quad USA$



W ↗ □ — (S) (O) (S)

BIG

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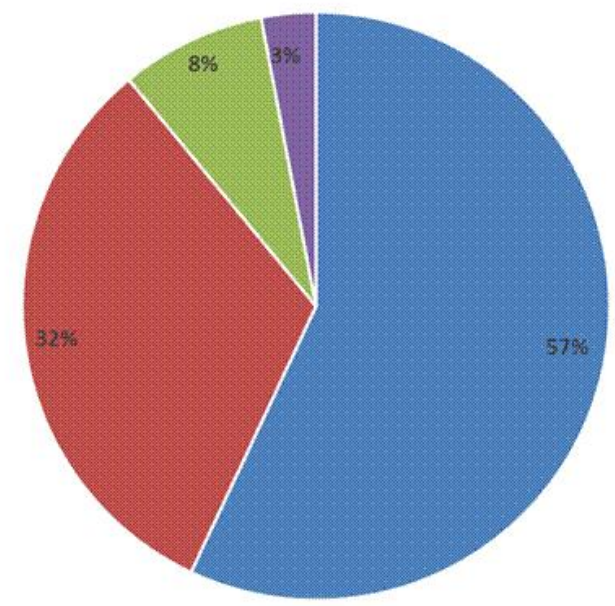
Top Big Data Applications



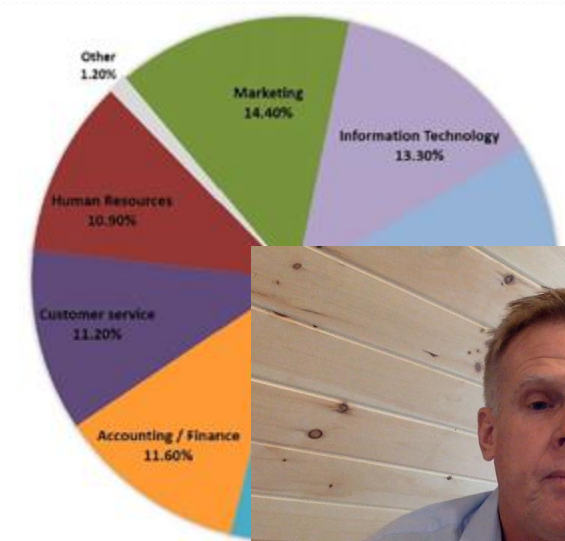
P O O
□ = S
= □ ∅



Big Data Market Share
Evans Data Corporation.

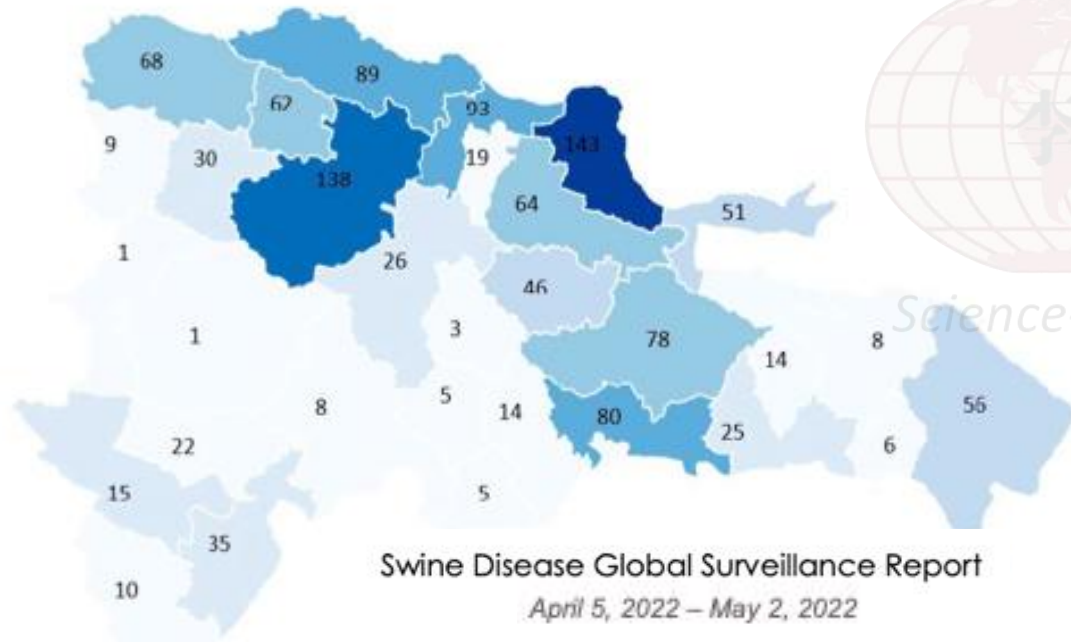


■ North America ■ Europe, ME and Africa ■ Asia Pacific ■ Latin

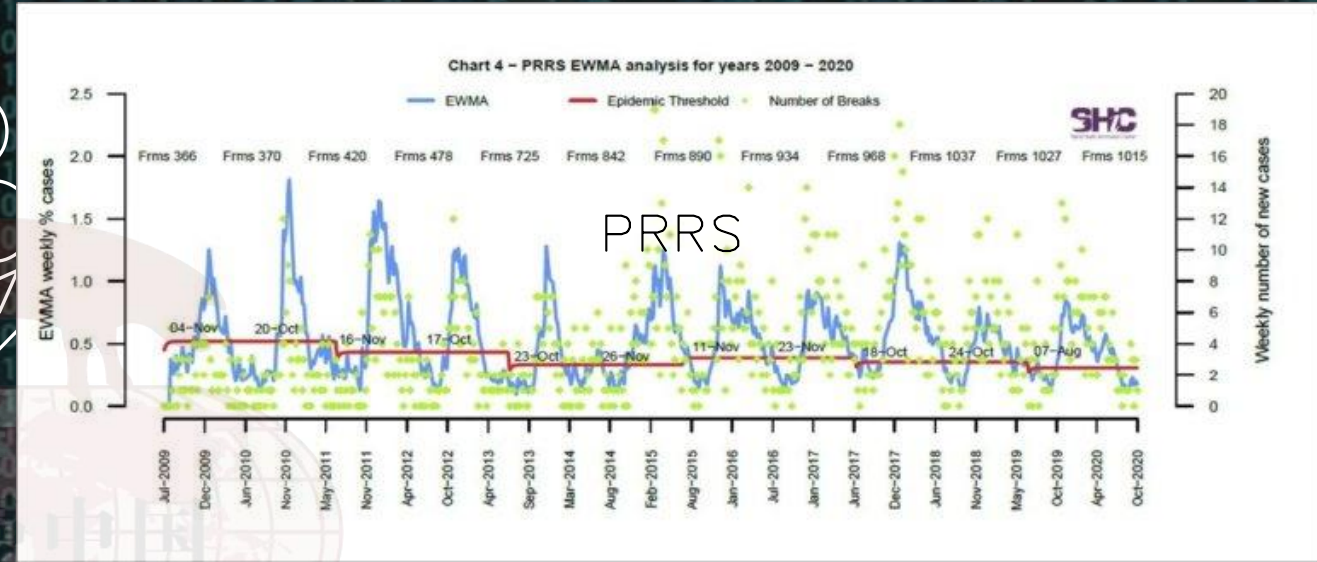


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Map 3. Distribution of confirmed accumulated cases of ASF in the Dominican Republic since the first case in July 2021.



SVC Newsletter – Octo



H □ √ ∠ ⊙ ⊙ √ ⊙ — ⊙ = ∅ ∅ DAT

PNAS

Global trends in infectious diseases of swine

Kimberly VanderWaal^{a,1} and John Deen^a

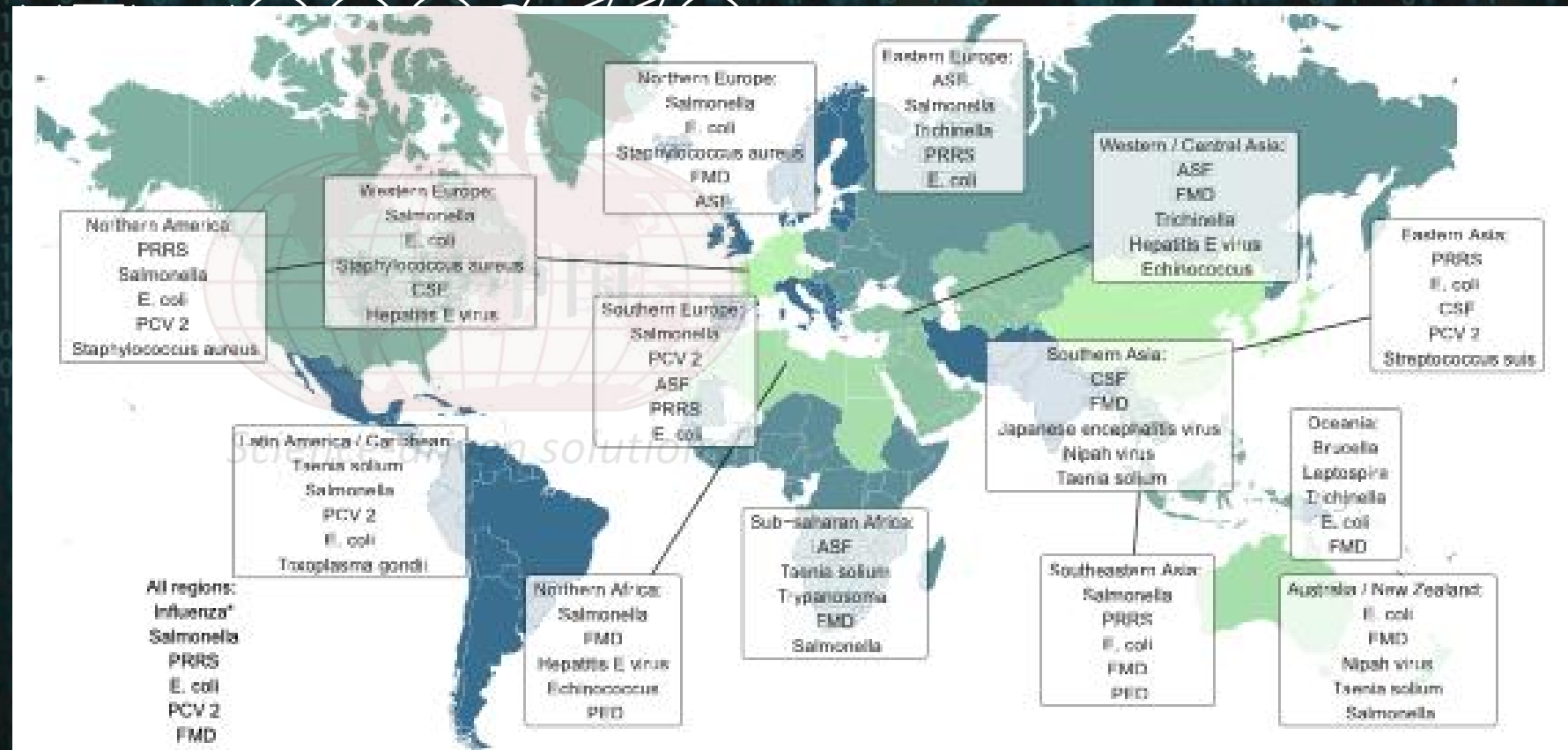


Fig. 1. Most important pathogens of swine by region during 2006–2016, ranked in descending order by publication number. Asterisk indicates pathogens appearing on each regions list and thus excluded from regional lists.

H □ √ ∠ ○ ○ √ ○ — (S) = ∅ / ∅ DAT

H □ √ ∠ ○ ○ √ ○ — (S) = ∅ / ∅ SEQUENCING ↗ ↗ □ ∠



The **microbiome is the largest organ** you may have never heard of, weighing up to



Soil microbiomes and one health

Samiran Banerjee & Marcel G. A. van der Heijden

The gut microbiome in health and in disease

Andrew B. Shreiner,¹ John Y. Kao,¹ and Vincent B. Young²

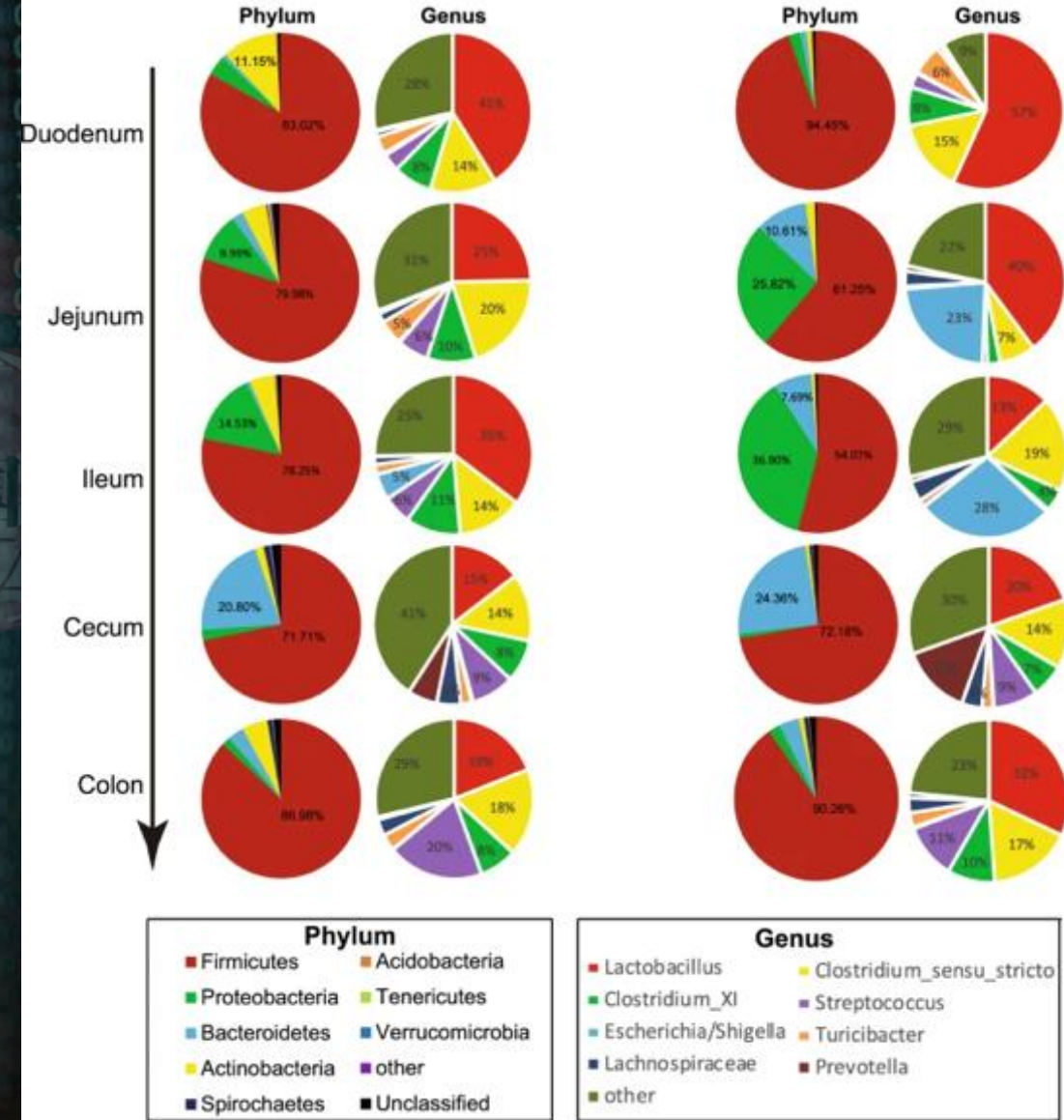
AnimalBiome

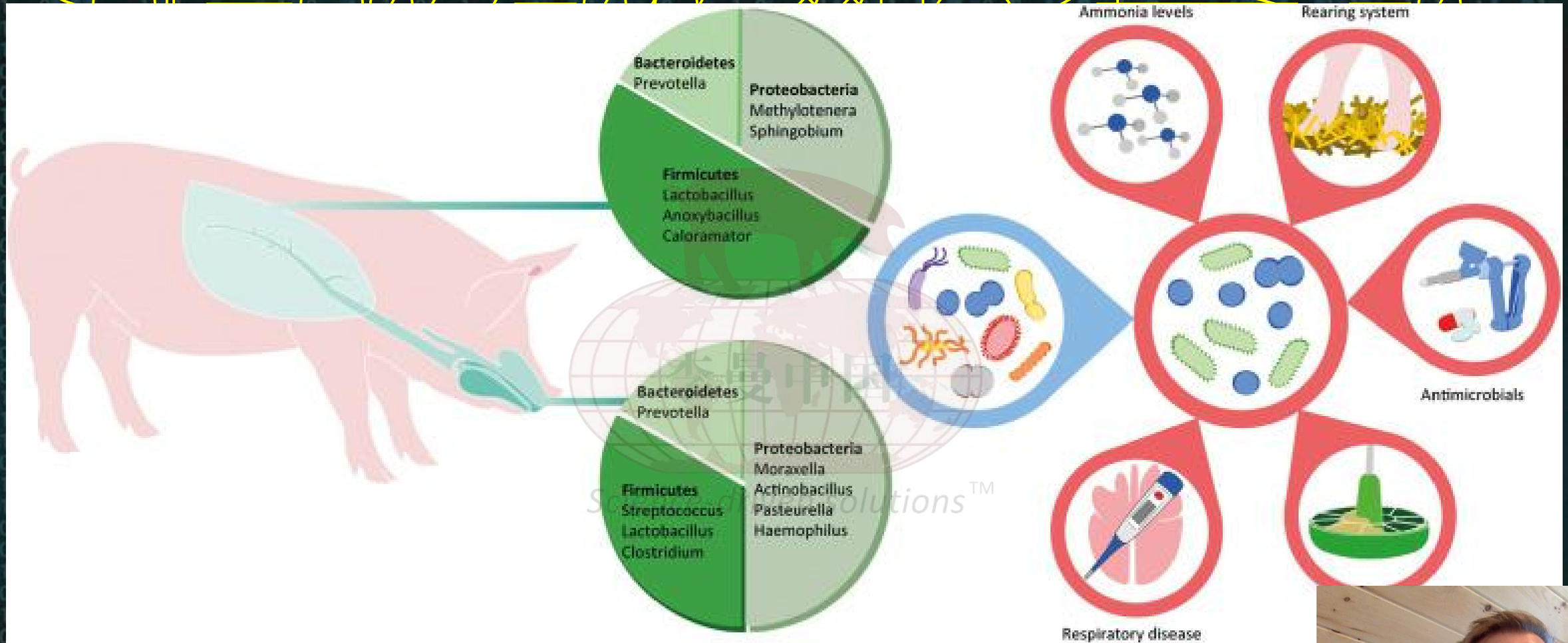


Jinhua pig



Landrace pig







OUR
MICROBIOME
IS MOST
CLOSELY
RELATED TO
THAT OF THE 



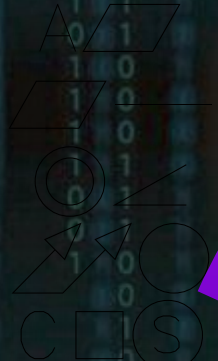
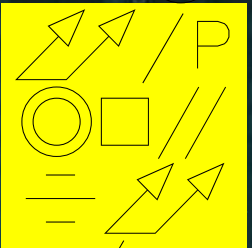
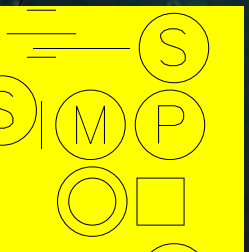
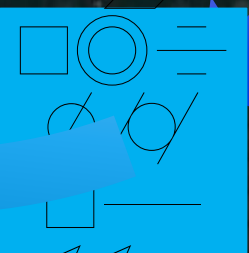
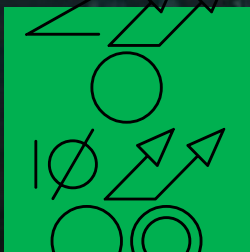
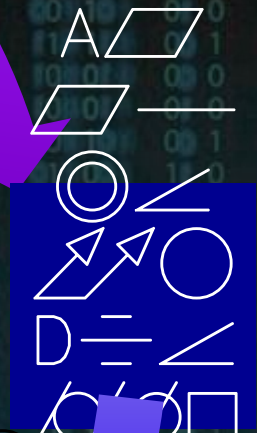
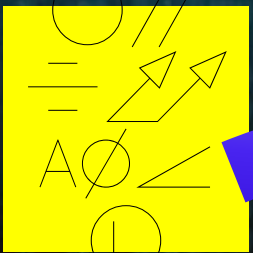
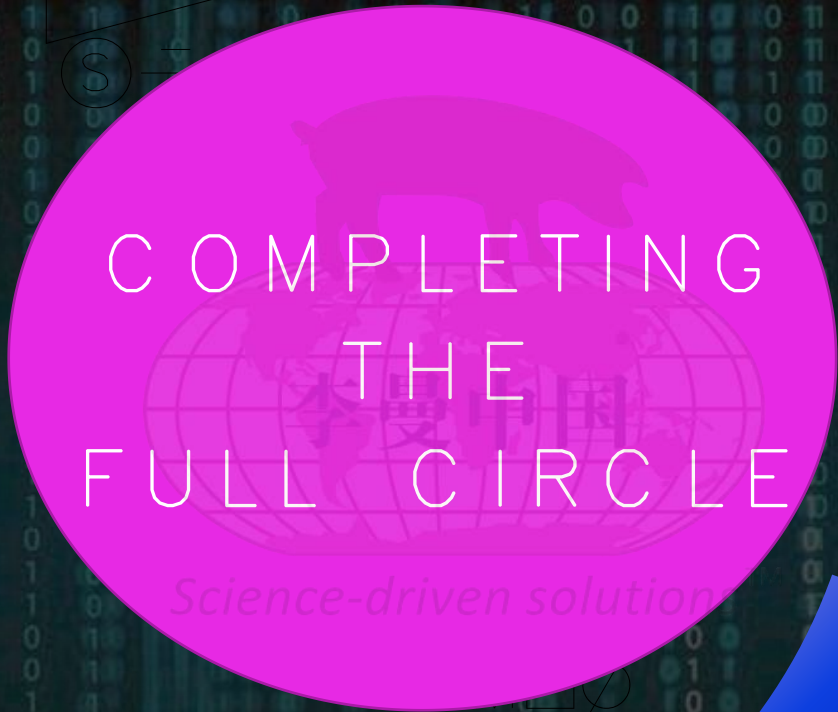
Science-driven solutions™

HOW CAN WE USE DATAST

COMPLETING
THE
FULL CIRCLE

Science-driven solution





S O Ø S □ ⊙ S - ∠ ⊥ ⊙
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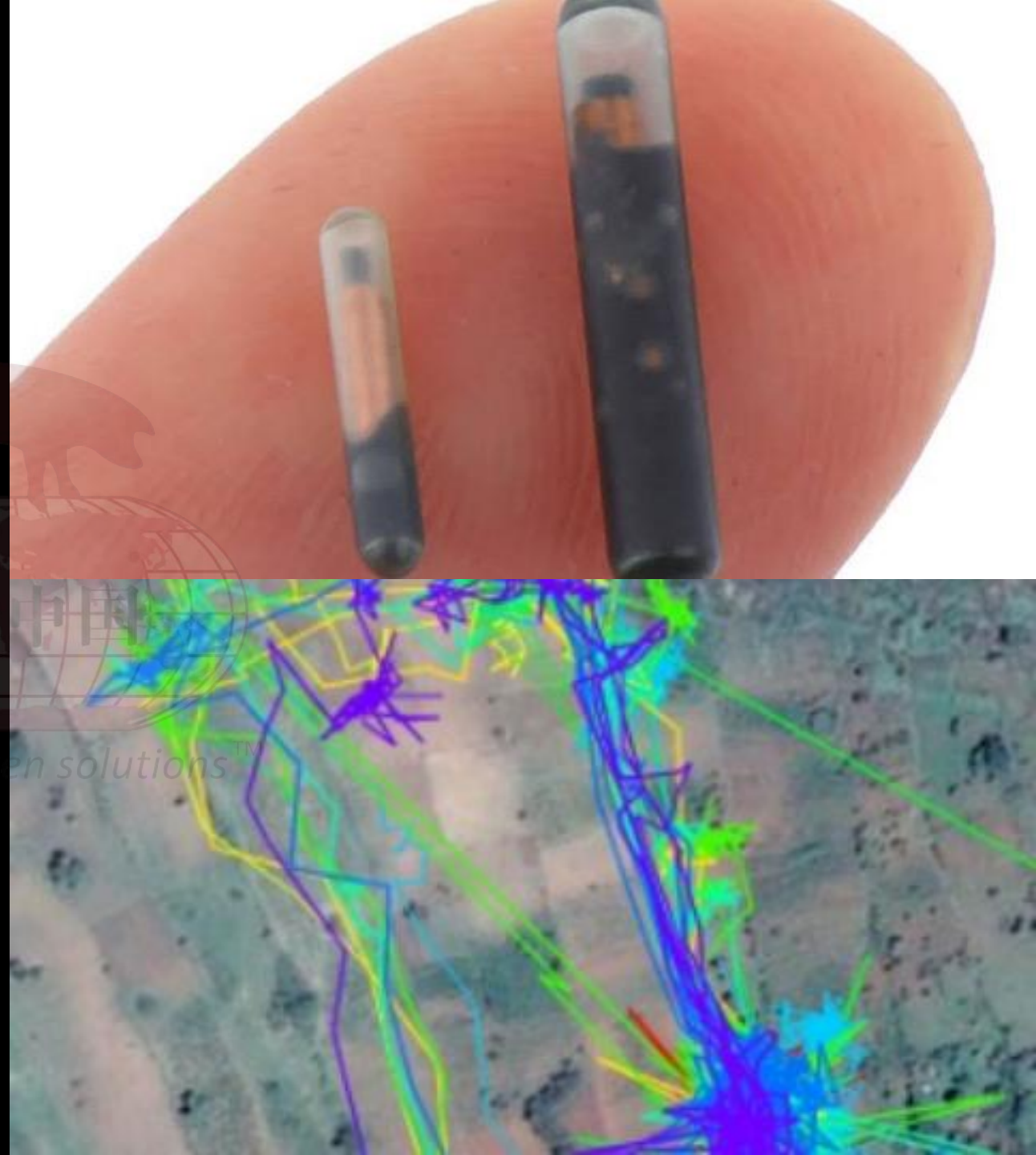
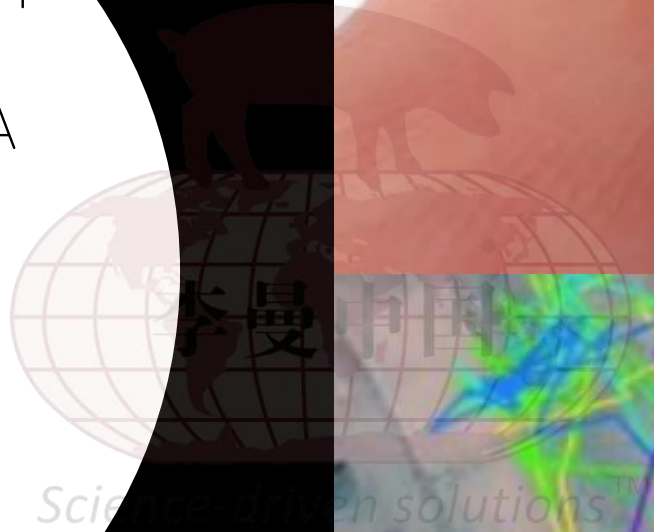


Z ↗ ∠ φ φ Y, M — ↗ ↗ — ⊙ ∠ ⊙ ∠ φ P, A φ ∩ ≡ φ □ —
P ∠ ⊥ ⊙ □ ⊥ S ∩ — ∇ ∇ V, U φ — ∇ ∇ I, E ⊙ ⊙ □ ≡ ∠ φ J,
S ↗ ⊙ P ∠ ⊙ ∩ KL. A — φ / ⊙ ⊙ φ ↗ ↗ ⊙ ∩



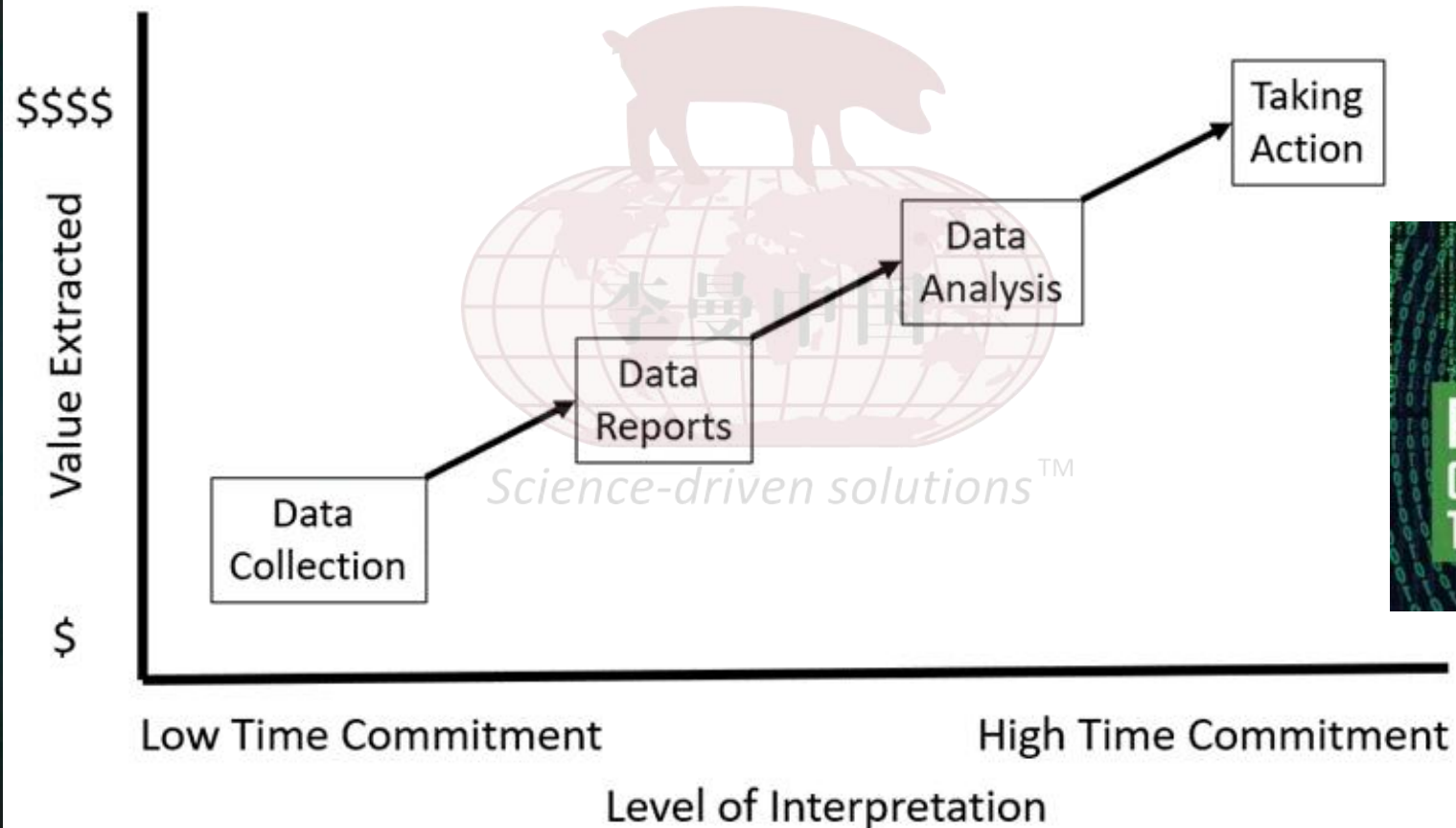
DATA ON PIG
WHO CURRENTLY
COLLECTS AND
ANALYSES DATA
IN THEIR
PRODUCTION
SYSTEM

AND
USES IT 



INTEGRATE DIAGNOSTICS<ST>

Extracting Value from Pig Performance Data



INTEGRATE DIAGNOSTICS

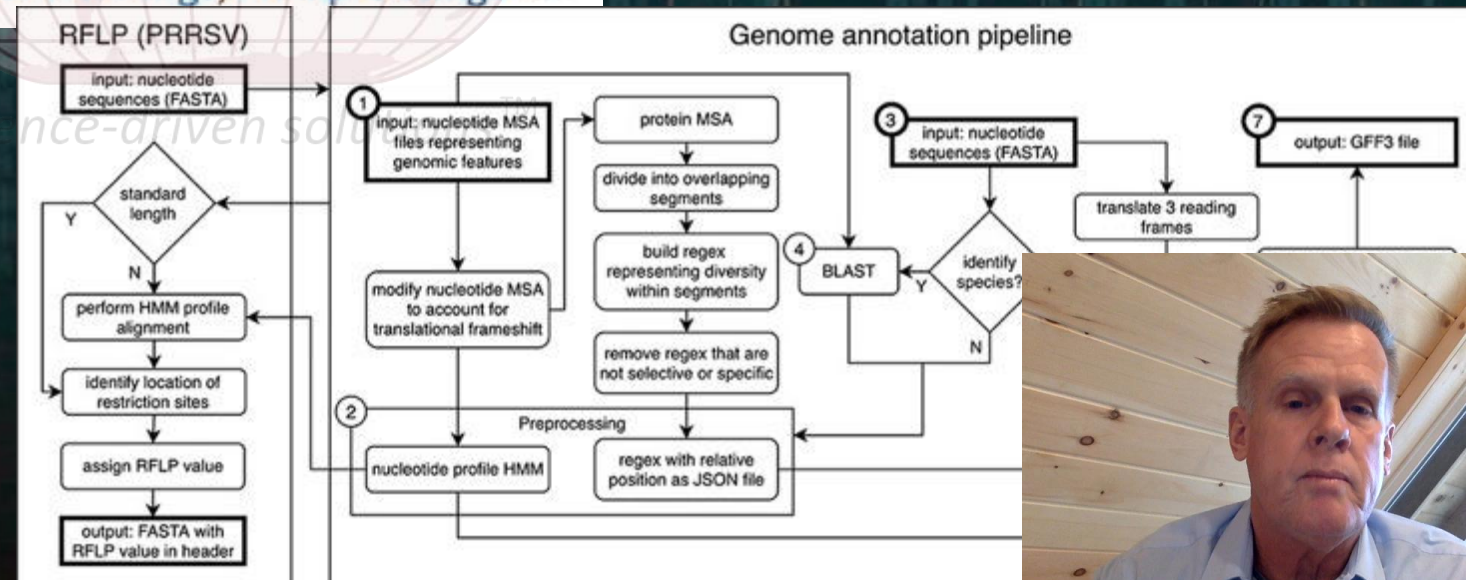
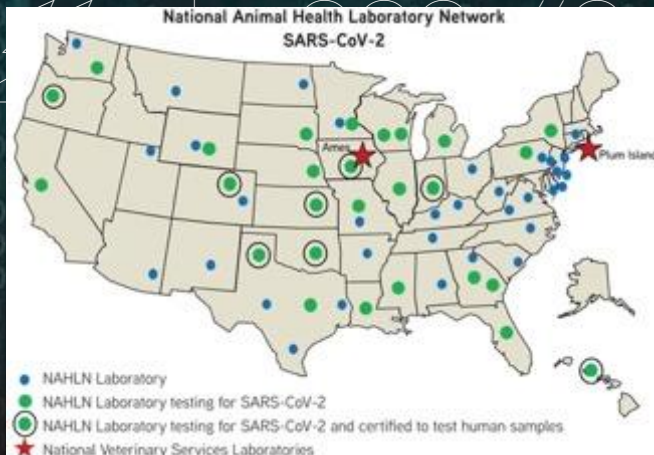
The United States Swine Pathogen Database: integrating veterinary diagnostic laboratory sequence data to monitor emerging pathogens of swine

Tavis K Anderson , Blake Inderski, Diego G Diel, Benjamin M Hause, Elizabeth G Porter,
Travis Clement, Eric A Nelson, Jianfa Bai, Jane Christopher-Hennings, Phillip C Gauger ...

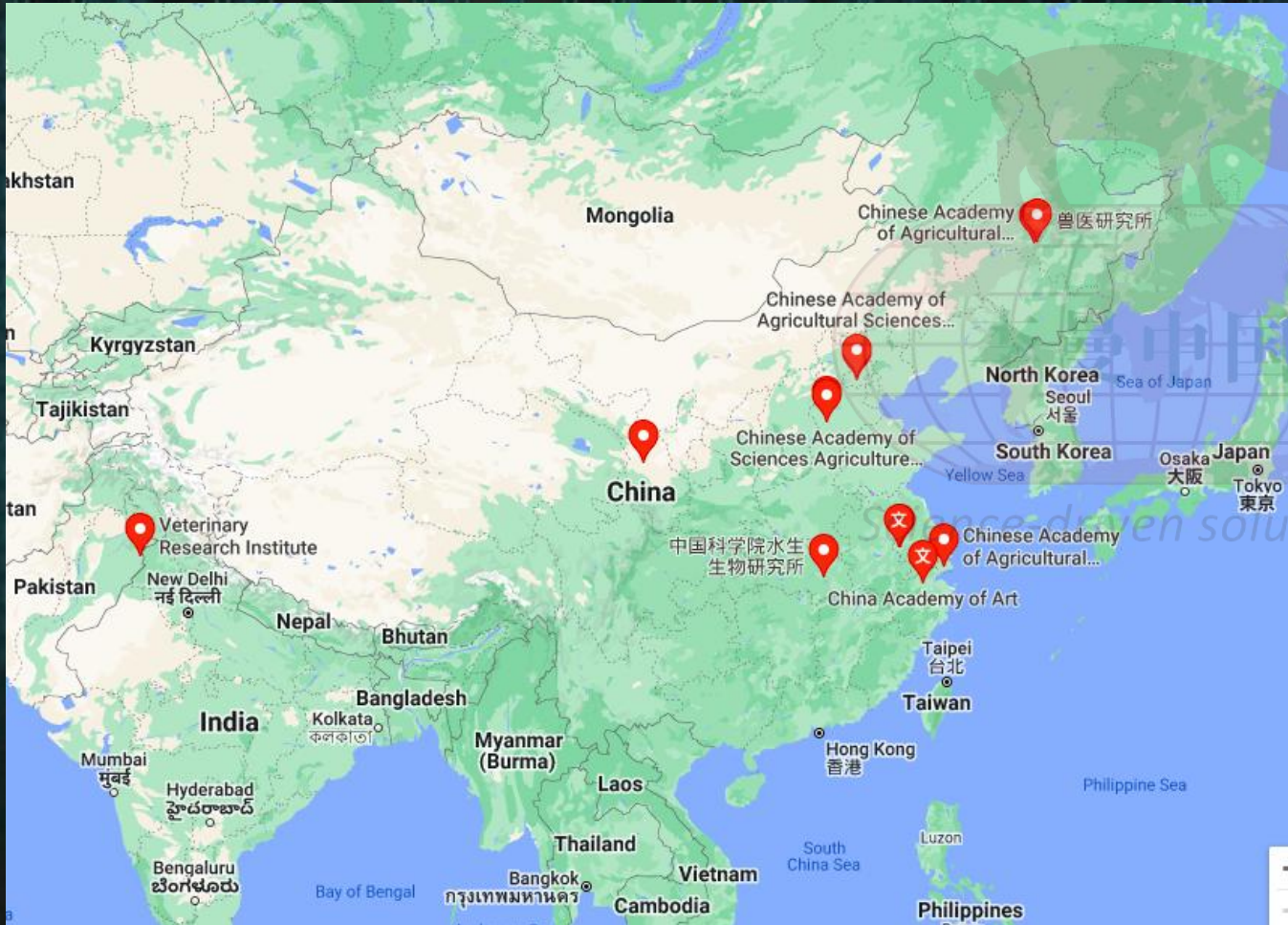
DATABASE
The Journal of Biological Databases and Curation

ISB International
Society for
Biocuration

Database, Volume 2021, 2021, baab078, <https://doi.org/10.1093/database/baab078>



INTEGRATE DIAGNOSTICS





IDENTIFY CONNECT YOUR SILOS

Feed Data
Swine Production Data
Carcass Yield Data
Accounting Data



Diagnose & Monitor

LIMS



Analyse & Predict

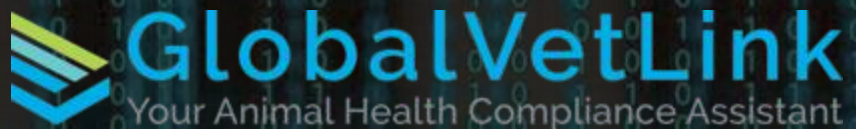


Intervene

New
Business
Model



RESOURCES



J Vet Diagn Invest. 2021 May; 33(3): 399–409. Published online 2021 Mar 26.

doi: [10.1177/10406387211003088](https://doi.org/10.1177/10406387211003088)

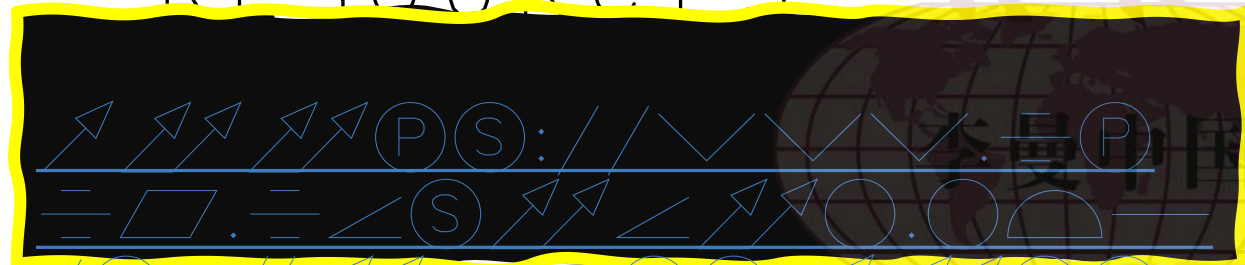
PMCID: PMC8120079 | PMID: [33769139](https://pubmed.ncbi.nlm.nih.gov/33769139/)

A proposal to leverage high-quality veterinary diagnostic laboratory large data streams for animal health, public health, and One Health

[Craig N. Carter](#)¹ and [Jacqueline L. Smith](#)



AVAILABLE SOURCE AND RESOURCES



Science-driven solutions™

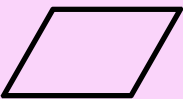
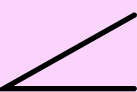


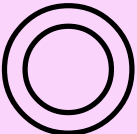
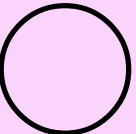
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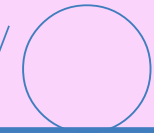
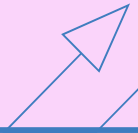
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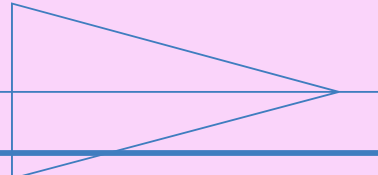
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Richard French

