



LESSONS LEARNED FROM IMPLEMENTING AND OPERATING A 24/7/365 RAPID DNA PROGRAM ACROSS THE UNITED STATES

DANE PLAZA
BODE TECHNOLOGY

1

WHAT IS RAPID DNA

The RapidHIT ID System:

- Sample collection to DNA report in as little as 90 minutes
- Automation of the same DNA process performed in the lab
- Designed to be operated by non-technical users
- Data is fully compatible with existing DNA databases
- Approved by the FBI/NDIS board for inclusion in the U.S. national offender database

DNA results in three easy steps



- **STEP 1:** Insert cheek swab or evidence sample into sample cartridge
- **STEP 2:** Insert cartridge and obtain DNA results in as little as 90 minutes
- **STEP 3:** Get hit/no-hit confirmation or relationship determination report

2

2

SOUTHERN BORDER CRISIS

- Since early 2018, DHS has encountered an illegal immigration crisis at the southern border, including an increase in fraudulent family relationship claims
- This fraud scheme involves adult non-citizens utilizing unrelated minors to pose as a family unit to secure release into the interior of the United States
- This activity has put a strain on the immigration system and exhausted border security resources



3

3

IMPLEMENTATION OF A RAPID DNA SOLUTION TO COMBAT CHILD TRAFFICKING

Key Achievements

- Bode Technology successfully developed and implemented a Rapid DNA reachback center
- Numerous Rapid DNA instruments deployed to several geographically separated sites
- Implemented 24/7 reachback with expedient data review
- Approach allowed for quick reaction to new requirements

Deploying Rapid DNA to End Users
Hundreds of operators were trained and certified for DNA collection and rapid DNA usage

Reachback Portal
Infrastructure Created to allow trained and qualified analysts to interface with instruments and operators 24/7

Comprehensive Field Support
Program includes training, certification, logistics, and program support

4

4

OPERATIONAL CHALLENGES

Deploying instruments to non laboratory environment

- Multiple geographically separated locations
- Instruments to handle estimated throughput in variable configurations
- Fully self-sufficient deployed capability

Consumable supply chain

- Instrument and supplemental items

Infrastructure

- IT, communications, bio-waste
- Data security and privacy concerns

Support

- Training
- 24/7 real-time support
- On site and/or reachback technical support

5

5

TECHNICAL APPROACH

Materials, services and logistics

Rapid DNA Vendor
Consumable and material suppliers
Sample collection
Biohazard waste disposal

Training

Training of deployed individuals
Development of non-technical user training program and materials
Reachback personnel training

Personnel


Field support analyst
Reachback analysts (general and paternity)
TL and PM

6

6

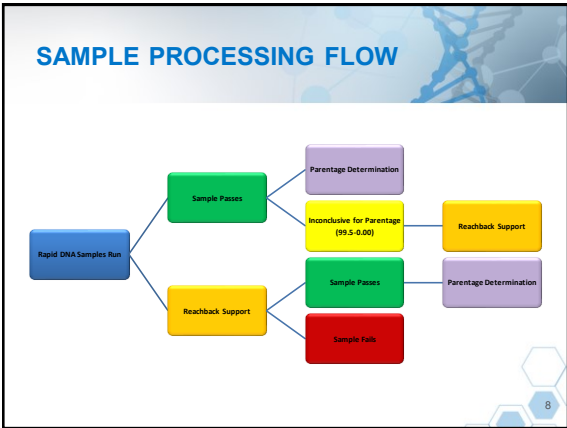
RAPID DNA – IMPORTANCE OF PARTNERS

- Advantages**
 - Accurate Testing
 - 90 minutes to results
 - Real-time investigative information
 - Reference or evidentiary samples
- Challenges**
 - Sample reachback
 - Not 100% successful
 - Requires Manual Review
 - Inconclusive Report Review
 - Sample Questions
 - Accredited Processing for Court
 - Training

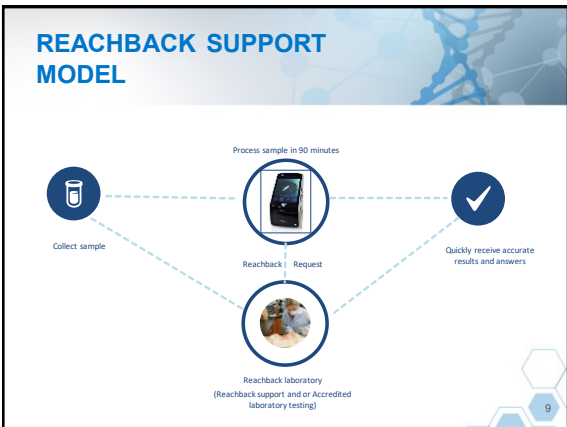


7

7



8



9

REACHBACK LOGISTICS



PERSONNEL

- Proficiency tested DNA analysts
 - Rapid certified and DNA laboratory proficient
- AABB certified paternity experts
- 24/7/365 availability
- Large pool with redundant scheduled coverages



NOTIFICATION

- Constant monitoring, text, phone, email



REVIEW


- Exporting of file and send via email
- Secure FTP transfers
- Remote encrypted access portal
 - No data transfers
- Internal network connections (rare)

10

10

SCOPE OF REACHBACK CAN BE FAR REACHING

- Sample reachback
 - Sample collection or run issues
- Instrument issues
 - Basic troubleshooting
- Inconclusive report reviews
- Parentage support
- Overall sample questions
- Accredited sample processing for court usage
- Supply ordering and infrastructure support (IT, Coms, waste)
- Training



11

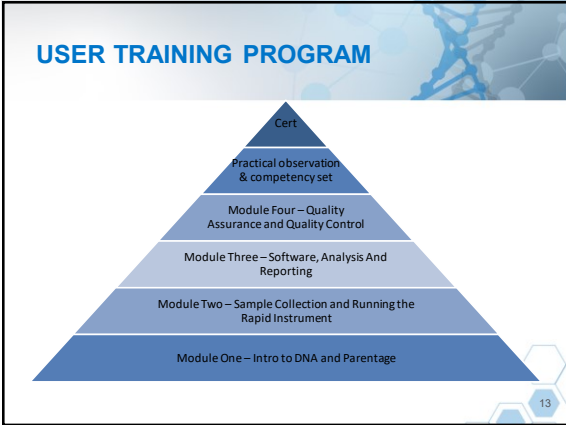
11

TRAINING PROCESS

Introduction	Usage	Documentation	Training	Evolution
				
Familiar with Technology	Practical Observations Competency Set	Training and certification	Train-the-trainer	Virtual and remote training

12



12



13

ISSUES ENCOUNTERED AND MITIGATION

- Geographic logistics
- Varying site conditions
- Non-technical operators
- Expansions or program changes on the fly
 - Reallocation of fielded instruments
 - Addition of sites
- On-site vs remote trainings

14

14

PROGRAM MILESTONES

- Operational for 26+ months
- Thirteen field forward, Rapid DNA sites established
 - IT infrastructure, remote connectivity, certified medical waste services and support consumable/supply shipments
 - Instrument reallocations and site relocations
- Over 8,500 deployed hours providing direct support
- >300 operators trained in Rapid DNA operation

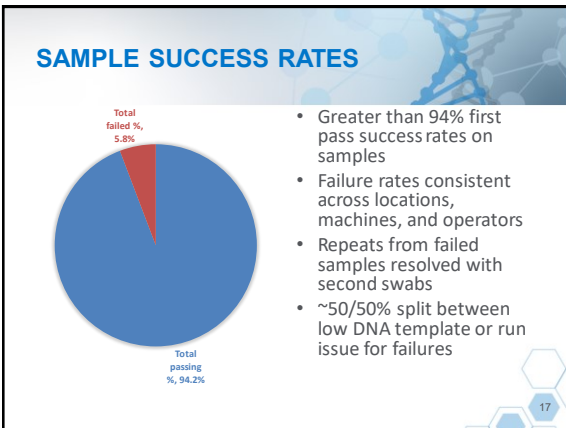


15

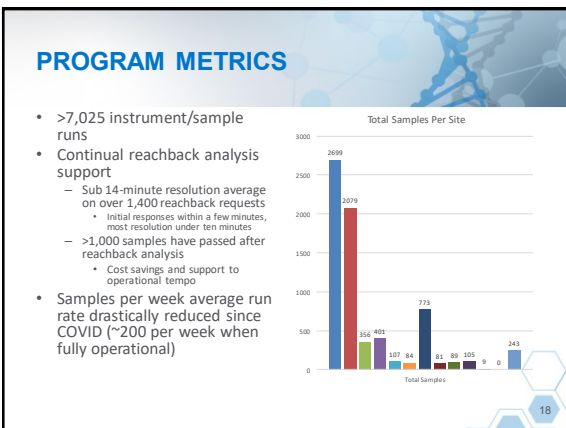
15



16



17



18

KEY LESSONS LEARNED



A RAPID DNA PROGRAM IS MORE THAN INSTRUMENTATION

TRAINING IS CRITICAL TO ENSURE BUY-IN FROM OPERATORS

LOCATION/PERSONNEL VARIATIONS ARE TO BE EXPECTED BUT CAN BE MITIGATED



REACHBACK IS MORE THAN SAMPLE REVIEW

SUPPORT STAFF DEPTH IS KEY

OPEN LINES OF COMMUNICATION AND FIELD FEEDBACK CAN DRIVE PROGRAM IMPROVEMENT



FLEXIBILITY IN APPROACH ALLOWS FOR WIDE RANGE OF POTENTIAL SCOPES

PLANNING AND PARTNERSHIPS CAN INCREASE POTENTIAL FOR SUCCESS





THIS PROGRAM CAN BE A MODEL FOR OTHER APPLICATIONS

22

22

ADDITIONAL RAPID DNA APPLICATION AREAS

Partners in forensics, law enforcement, and public safety can benefit from Rapid DNA results in many applications

 <p>Investigative lead testing</p> <p>Generate investigative leads from DNA in real time that can help solve property crimes, auto theft, and other local crimes</p>	 <p>Disaster victim identification</p> <p>Field deployable solution for immediate identification of disaster victims, identification of the missing, to reunite families</p>	 <p>Booking Station (Arrestee testing)</p> <p>Generate hits while a suspect is still in custody to identify or exclude suspects faster</p>	 <p>Border Control</p> <ul style="list-style-type: none"> Identify unaccompanied minors, limit human trafficking and illegal immigration Conduct family relationship verification ID authentication
--	--	--	--

23

23

QUESTIONS/COMMENTS

DANE.PLAZA@BODETECH.COM



24

24