

# NLA PTS 2016 FEEDBACK

RPF

CSIR Conference centre

Pretoria

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7<sup>th</sup> November 2016

A B C or  
X Y Z ??



# Discussion to include...

- Intro & general comments
- What are the Numbers
- DSR results
- Typical errors encountered
- General info
- 2017 & other future plans

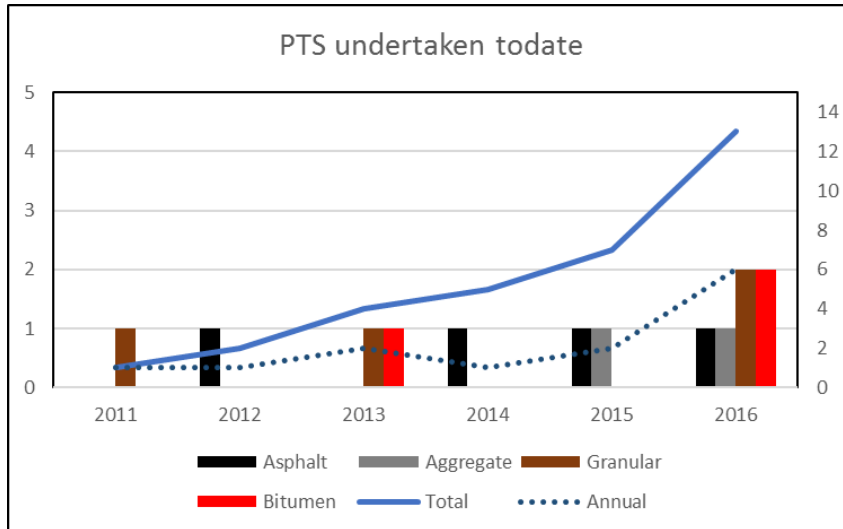


# Intro & General comments

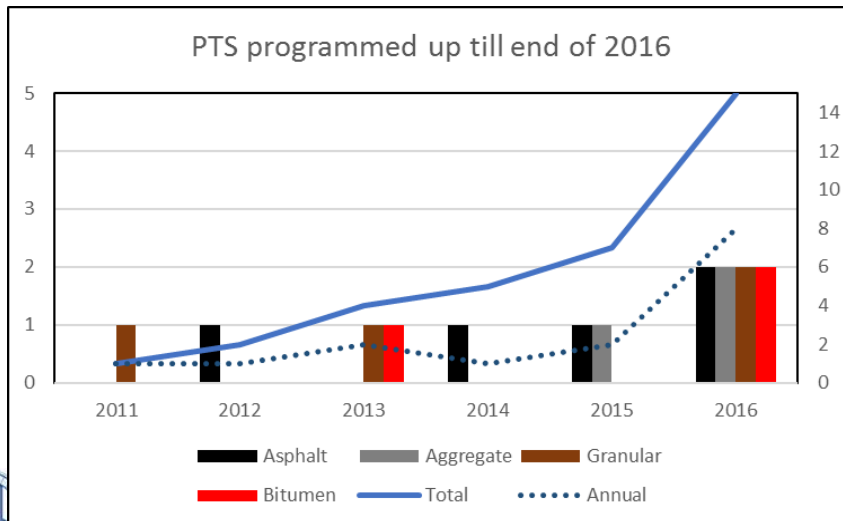
- Used Robust stats StDev & range as evaluations tools
  - StDev a better indicator as it's a relative result
  - Range less effective
    - more to get a sense of actual variations based on the specs
- What are we looking for
  - **a decrease in StDev & Range**
- Some results within a material type need to be assessed separately
  - Granular material with/without PI
- Require at least 3 sets of results to get a sense of trend
  - With more results, trend will become more apparent
  - Limits can then be more accurately determined
    - What can we expect in the range of results
- The trend graphs will be presented next year once we have 4 rounds with all material types

# What do the numbers look like?

## PTS undertaken



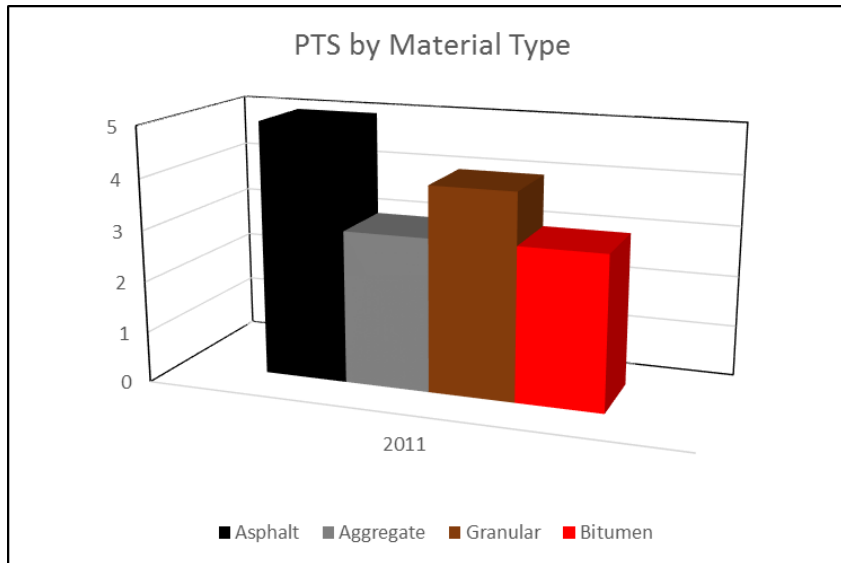
- Overall todate
  - 2011 – 2016
  - 13 in total
  - 6 this year



- Up till year end including last 2 rounds
  - 15 by year end
  - 8 for this year
- 10 proposed for 2017
  - Possibly 12 ...

# What do the numbers look like?

## By material type

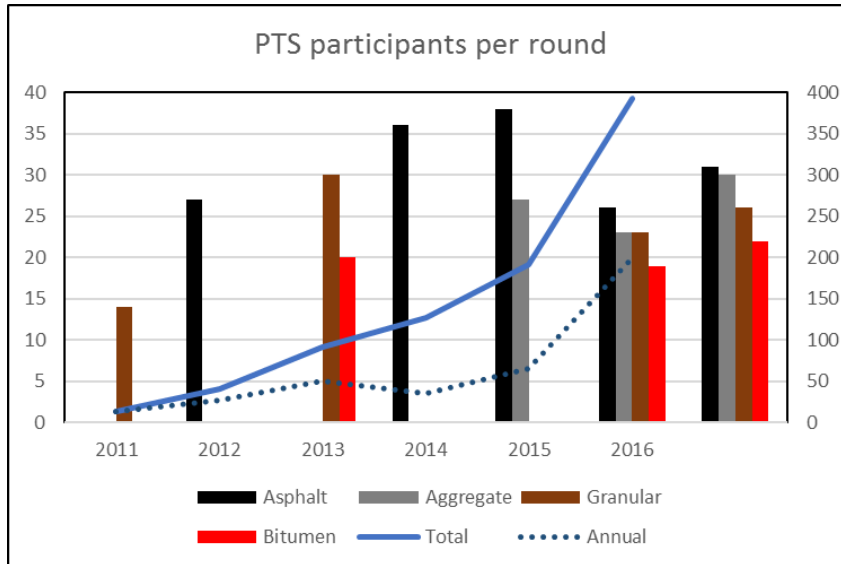


- Asphalt 4 (5)
  - Aggregate 3
  - Granular 4
  - Bitumen 3
- 
- 5<sup>th</sup> asphalt round to be sent out on 14<sup>th</sup>
  - Granular report due out this week
  - Aggregate report due out before year end

A big thanx to the organisations that have assisted with donating material for the PTS rounds in an endeavour to keep the costs down & to SABITA for the initial sponsorship

# What do the numbers look like?

## Participating laboratories



9 other countries in SADC region looking at implementing a PTS scheme as well as SADCAS accreditation in labs.

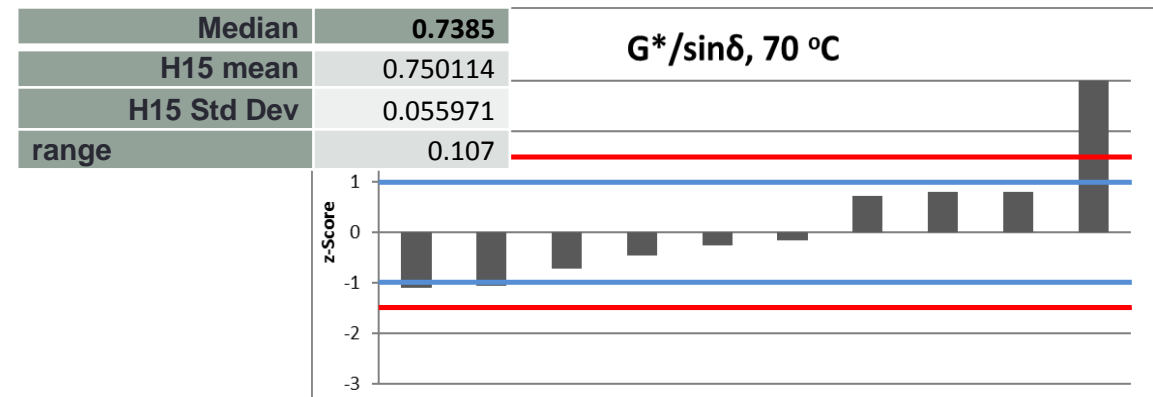
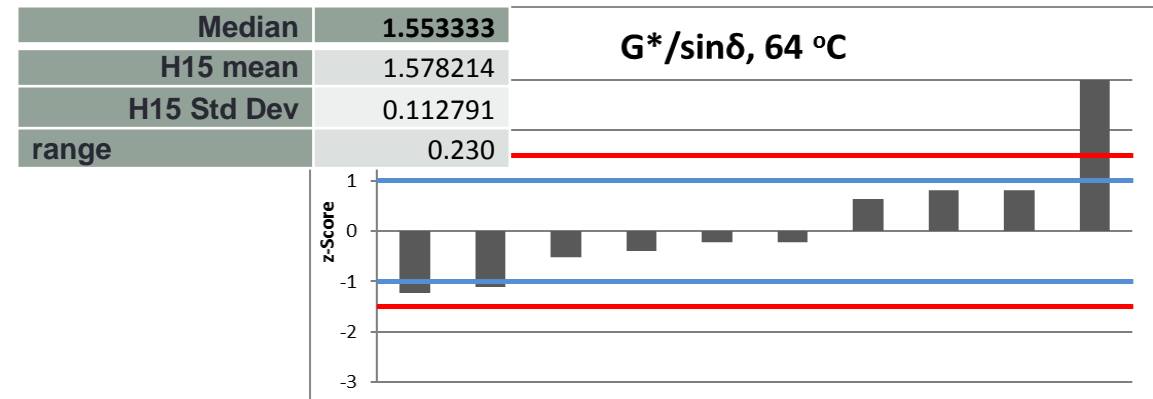
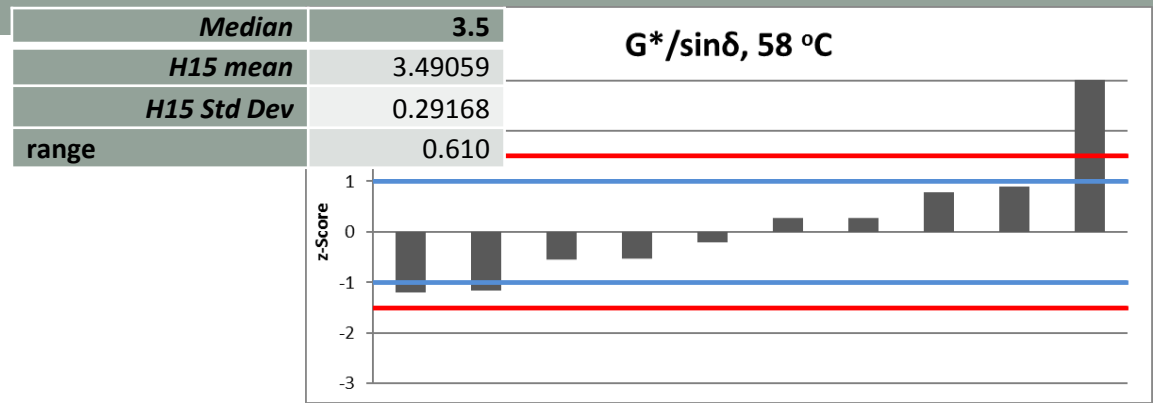
Looking to replicating this system in SADC region.

Mozambique & Zambia already on board

- 392 total
- 2011 – 14 #
- 2016 – 200 #... & counting
- Average 28/round
- Numbers did dropped a bit with the revised method & costing
  - Due to new system being misunderstood
  - Already on the up for the 2<sup>nd</sup> round
- Participants include Zambia, Kenya & Uganda

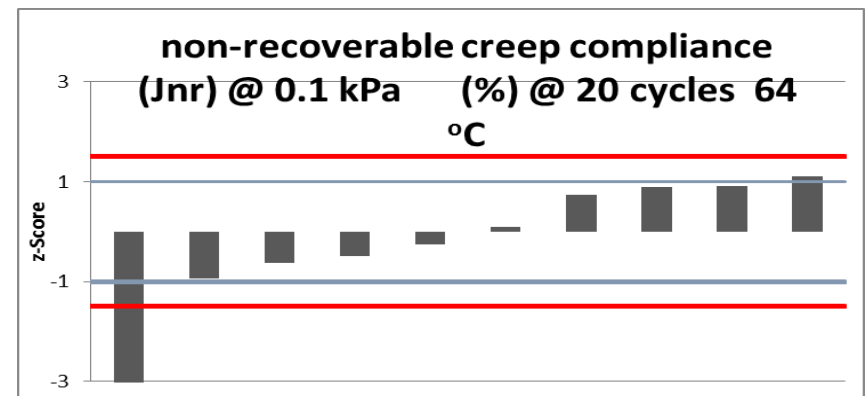
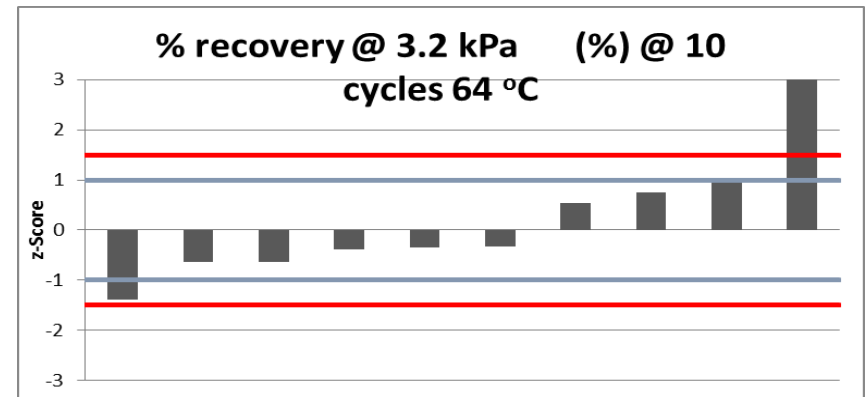
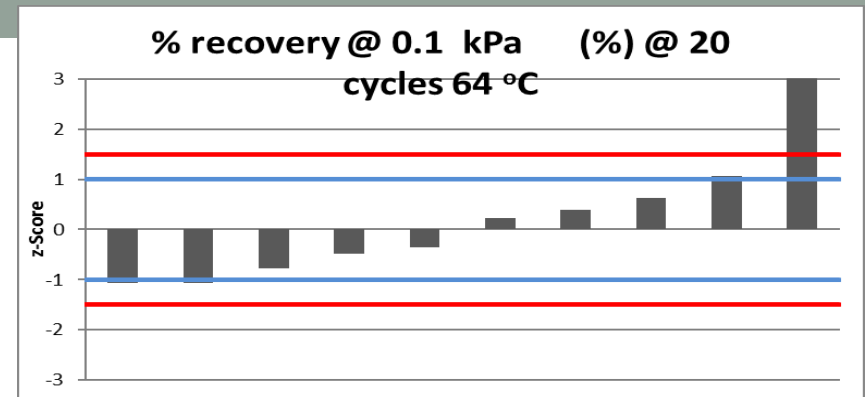
# DSR feedback Before RTFOT

- Correlation is now much improved
- Variations in test method resolved
- 10 participants
  - 1 extra from 2017
- In most set of results
  - 1 OB
  - Not always the same laboratory
- **Results done on**
- 58, 64 & 70 °C
- Before RTFOT
  - $G^*/\sin \delta$
- After RTFOT
  - % recovery @ 0.1 & 3.2 kPa
  - Jnr – non recoverable creep



# DSR feedback

- Results after RTFOT @ 64 °C
  - % recovery @ 0.1 & 3.2 kPa
    - @ 20 & 10 cycles respectively
  - $J_{nr}$  – non recoverable creep
    - @ 20 cycles
- 58 °C & 70 °C results not shown





# Typical errors encountered

- Rule No1 for PTS participation
- **FOLLOW THE TEST METHOD TO THE LETTER!!!**
  - Inaccuracies often attributed to this issue
  - If the methods used by the participants aren't the same
  - The variations are not determining the material variability
  - Makes the PTS results less relevant
  - That result often results in an OB
- FI calculation approach differs
  - Average of % per fraction
  - Average of % per fraction with weightings included
- Dynamic Viscosity
  - 3 readings before viscosity consistent
  - Wrong spindle
  - Thermosel "lid" catching spindle wire & increasing vis reading
- SE
  - Calculation done on 200 mm reading
  - BUT actual distance = 215 mm!!!
  - All results since this apparatus was bought & used are incorrect.
- Finally
- **DO THE SAME METHOD IN YOUR DAILY ROUTINES!!!**
- Assists in reduced disputes & produces better quality results

# Other general info & a concern or 2

- Adding additional info added to report form to assist in identifying method issues
  - Automatic / manual app?
  - RV Viscosity info
    - torque, speed & spindle #
    - Hand held / table top
  - CBR - DD for A, B & C moulds
  - Mass -0.425 mm (GR)
  - Mass  $\pm$  20 mm, RF (GR)
  - GR10, GR11, GR12
- **Concerns**
  - **LL** – 1 point most variable in its results!!!
  - Most common method used???
- **CBR** – far too variable
  - As a result of 37.5 mm packing ??
  - DD gives far more consistent results
- Looking to add the following
  - BD Agg  $\pm$  5 mm
  - GM, FM (including sand grading)
  - Coarse, medium & fine sand
  - Binders
    - Emulsions?
    - Modified binders?
  - Concrete 100 mm cubes
    - Cure & Crush only
    - Slump??
  - **Anything else you require...?**
    - Let me know
- As participants – if you have queries or input let NLA or myself know
- Australian method
  - PT provider inspects OB's
  - Raises NCR's if required
  - Can propose suspension

# 2017 & Future plans

- ASPASA & SARMA also looking to join PTS
  - Potential huge increase
  - Already have 1 quarry on board
- Concrete PTS still needs to be added ...
- Looking at 2017 results possibly as electronic upload
  - If results entered incorrectly, analysed as submitted
  - To assist in quicker reporting turnaround times
    - Benefit to labs needing to take action
    - For accreditation purposes
- Will be approaching new suppliers for PTS material donations & splitting/preparation for 2017 shortly
- SANRAL site labs still need to get involved
  - **Consultants / RE's - please consider this for peace of mind on your site labs!!!**
- Annual PTS advertised into end of each year
  - Will be available by end Nov 2016
  - Select basket of PTS to partake in
  - Register for annual PTS with your choices
  - Pay applicable PTS fee
    - Once off for all PTS's chosen
    - Sit back & await your 1<sup>st</sup> sample
- Looking at possibly having the PTS added to NLA-SA ISO 17043 PTS accreditation schedule by mid-2017

# In closing... as always

- **Purpose**
- to improve consistency of results between labs
- Assist in identifying your own internal areas that require attention
- addressing these issues
- Improving the consistency of the methods being used between laboratories
- Besides being a requirement for SANAS accreditation

- Building towards a more professional laboratory environment that will be seen as being
- Trustworthy
- Honest
- Quality driven

Keep at it - we are making progress !!

Thank folks...

