

Smarter Futures/FFI QA/QC Workshop
LUSAKA

15 - 18 May 2017

*"We cannot be successful,
nor can we call ourselves
successful, in a society
that fails."*

Feike Sijbesma, CEO DSM



DSM International Presence



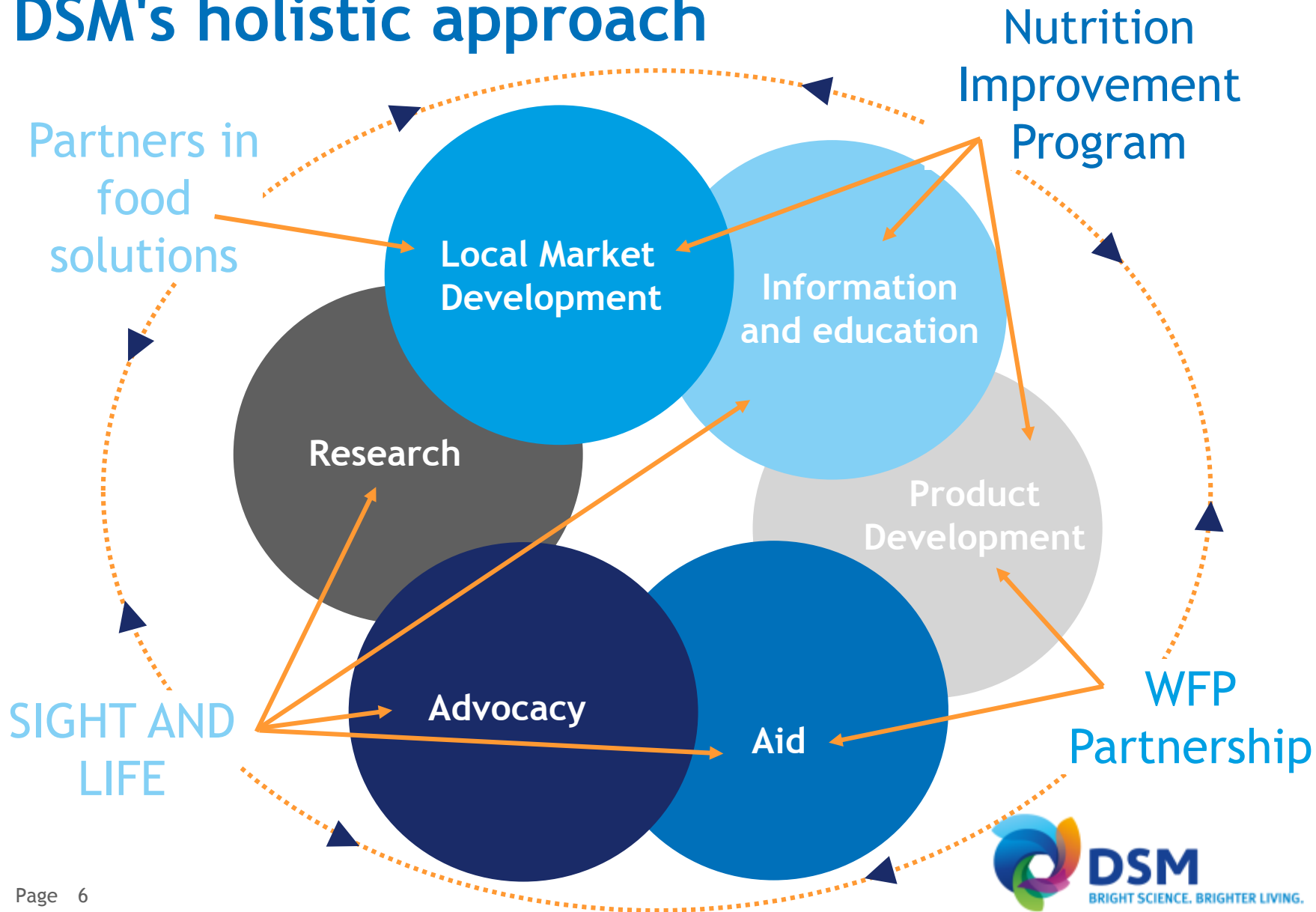


DSM Nutritional Products South Africa (Pty) Ltd.

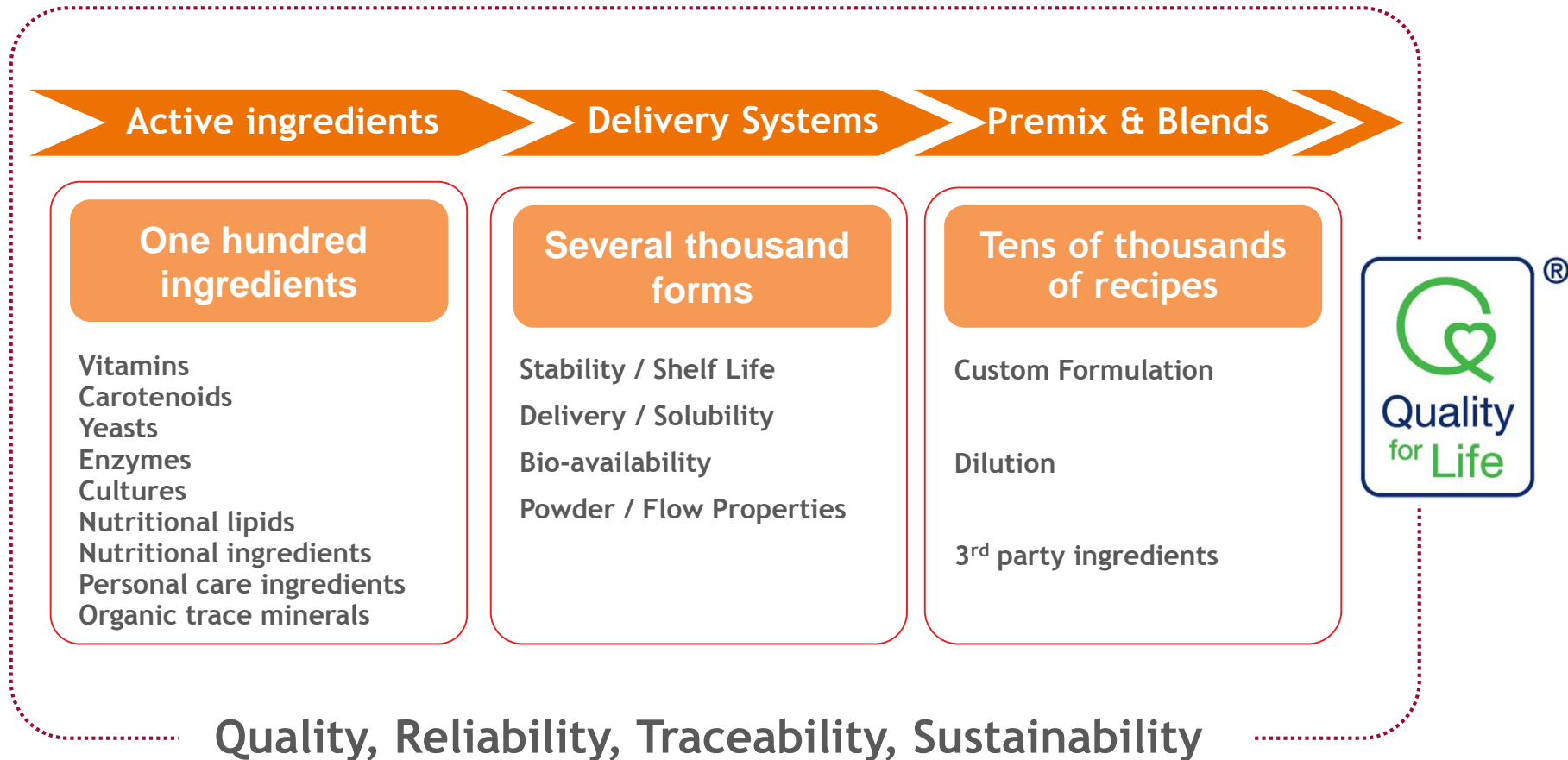
DSM at a glance...



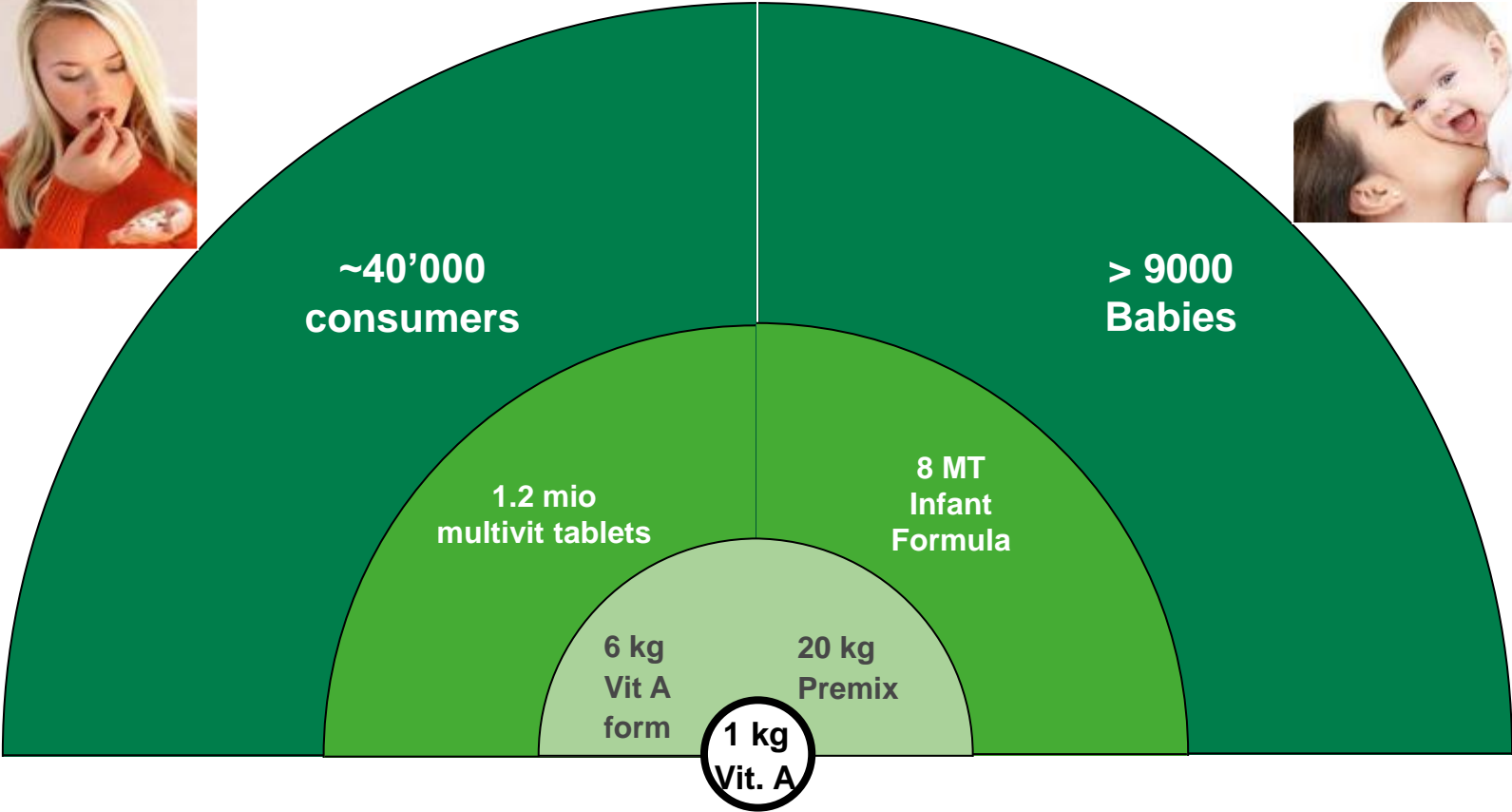
DSM's holistic approach



DSM is the one-stop-shop for nutritional solutions



Small ingredients. Big impact.



...backed by DSM's Quality for Life™ promise

Quality
Reliability
Traceability
and...**Sustainability!**



Peace of mind!



The High Cost of Low Quality

- **Ripple Effect** - Saving a few cents to dollars on premix can impact several metric tons of final product that will go to millions of customers, and could result in significant financial losses in the form of product recalls, lower sales, lawsuits, damaged reputation
- **Inconvenience** - High quality premix flows and correctly doses, while a lower quality may be lumpy and cause inconsistent dosing. Poor flow will impact operational efficiency and costs, potentially negating any purchase savings. A third party could test and question whether a producer is complying with the law, any savings achieved would be wiped out in defending their product. Stability of lower quality and lower cost premixes can cause major problems. Premixes may appear stable at first, this can be misleading as they can quickly destabilize!
- **Danger** - High quality and more expensive ingredients carry their premium due to the extensive quality and safety checks, for example microbiological contamination is not easily verifiable until usage or consumption, there is a potential hidden cost of cheaper goods.

Vitamins and vitamin premixes

Stability and Shelf life (Best Before Date)

How stable are vitamins?

DEPENDS!!!

- Which vitamin?
- Which application form?
- What type of product?
- Where it is added?
- Conditions of processing and storage?
 - Low temperatures
 - Minimise exposure to light and humidity
 - Keep sealed between use

See link

https://www.dsm.com/content/dam/dsm/nip/en_US/documents/stability.pdf

Supply and Demand and logistical concerns

- Vitamin straights are not made in Africa - USA, EU and East
- Production often tight (world wide) and if an individual plant goes off line - problems
- Most premixes are “made to order”
- Need for accurate forecasting/communication to ensure smooth flow of premixes into countries and to manufacturers avoiding **stock outs**.
- DSM premix plant in SA but we still have a requirement to order our individual vitamins as raw materials for premixes. Many different product forms.
- Lead-times of 6 to 8 weeks
- Road/air freight options
- Time for deliveries - considering time at border for inspections/clearing

The background consists of several overlapping, wavy horizontal bands in various shades of orange and yellow, creating a sense of movement and depth. The colors range from bright yellow to deep, dark orange.

BRIGHT SCIENCE. BRIGHTER LIVING.™