

Private Design & Research Centers as Pivot for Defence Corridor

A SWOT Analysis



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Defense | Nuclear Power | Aerospace | Infrastructure | Industry



About Zeus Numerix Pvt. Ltd.



- Commercial spin-off from **IIT Bombay** since 2004
- Engaged in virtual simulations and analysis of engineering systems
- Projects focused on engineering concepts that are expensive, critical & difficult to experiment
- Recognized by **FICCI, NASSCOM** as innovative technologies company
- **CEMILAC** approved company for design & design certification in *Aerodynamics, Structures, Dynamics and Control, Electromagnetic (Stealth)*
- **DSIR**, Govt. of India recognized R&D company



Customer Base

Government R&D



18 Labs



4 Labs



2 Labs



OFB



Industrial



It's all about Imagination



Mahindra



TATA POWER



International



AIRBUS



MISSILE SYSTEMS



Pumpen Intelligenz.



Manufacturer's Dilemma

“Build to Print”

OR

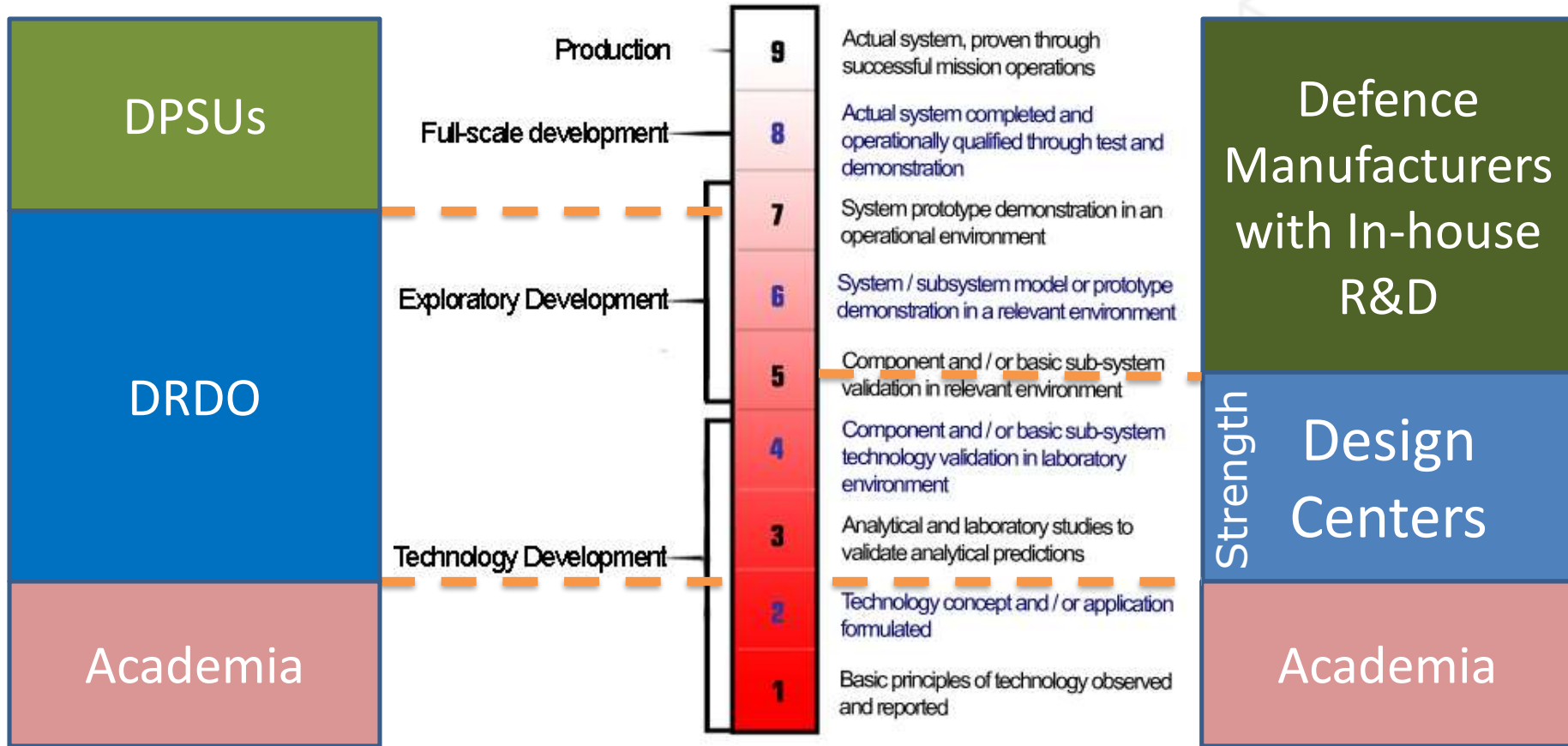
“Build to Spec”

Opportunity for Design & Development Centers



Credible Technology Roadmap

R&D - Technology Readiness Mapping



Reason to Encourage R&D Centers

- Completes the Defence Ecosystem
- On Demand Design & Research Services
- Cost Effective than In-house Infrastructure
- Retains Hi-Tech Talent within State
- Starting Point towards Industry 4.0



Weakness as 'Pvt. Ltd.'

Starting-Up

Opportunity Size **vs.** Engagement Reality

Urgency on R&D **vs.** Administrative Steps

- For upcoming entities in defence incubators / innovation centers ?
 - Can MoD organizations extend **CARS** ?
 - Can **academia** share its consulting assignment ?



Threat to Growth

Breakthroughs in **Indian R&D** help 'marketers of foreign OEMs' convince their respective governments to **lift export sanctions** over supply of advanced defence equipment to India

Thus, our indigenous R&D efforts often do not become part of equipment in use with the forces

A **policy** intervention is requested here



Core Beliefs – Zeus Numerix

- Numerical simulations is an **integral part of defence design** and development where systems operate at extreme environments
- Off-the-shelf packages may be good starting point, but in-depth analysis requires **ownership over IP** that can be tuned, scaled-up or coupled without any restriction as per design requirement
- Like everything else in defence, Zeus Numerix will continue to develop **indigenous capabilities** and self reliance in our chosen area of activities



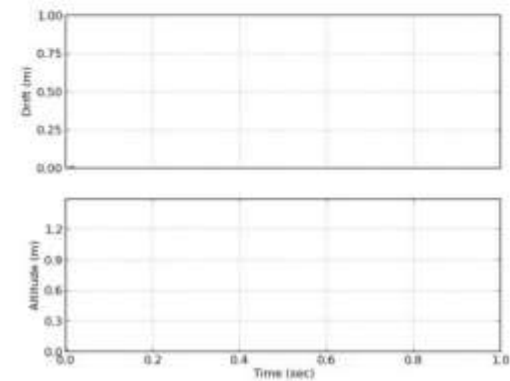
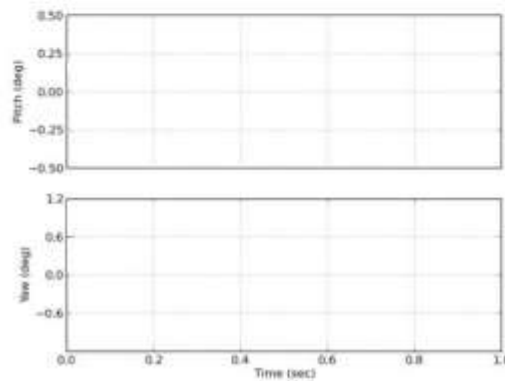
Engagements (Aerospace)

Overcome fear of unknown



Engagements (Land Systems)

Hit first time,
every time



Engagements (Naval)

Design for survival



Thank You!

