

Adequacy of Supply to meet SME Support Requirements - A Snapshot of the Survey -

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SineQuaNet : Mission Statement

- **to provide a structuring tool** to deliver technical & engineering support to SMEs in (or looking to enter) the space industry
 - **to enable SMEs to access technical support**
 - to help improve skills
 - to lower entry barriers to the space industry
 - to foster competitiveness of SMEs in space **and** non-space markets
 - **to develop a network :**
 - of engineering & appropriate other expertise
 - to provide support on a commercial, non-profit basis



Questionnaire on Sources of Support : Experts, Training, Access to Facilities

- **What are your main space product markets?**
 - * satellite payload; * downstream systems & services;
 - * sat. ground stations; * satellite bus; * launchers
- **Can you provide support (expertise, or training)? in :**
 - ♦ Space engineering ♦ Project management ♦ Space product assurance
- **Can you provide access to calibration & test facilities ?**
 - what's the % availability in a typical year?

197 responses (relevant @ 30th June 2006, from 255 received) :

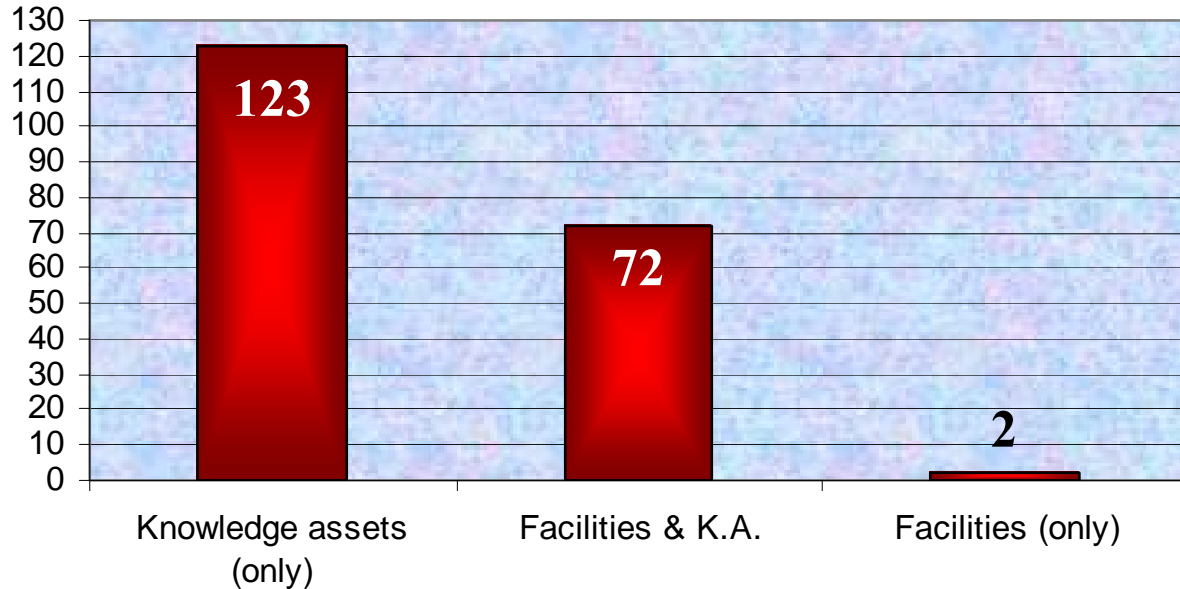
SMEs (122)	Large Enterprises (28)	Research Institutes (47)
62%	14%	24%

Responses : Knowledge Assets, Access to Facilities

Knowledge Assets (K.A.) = Expertise, Training

of Responses In Database

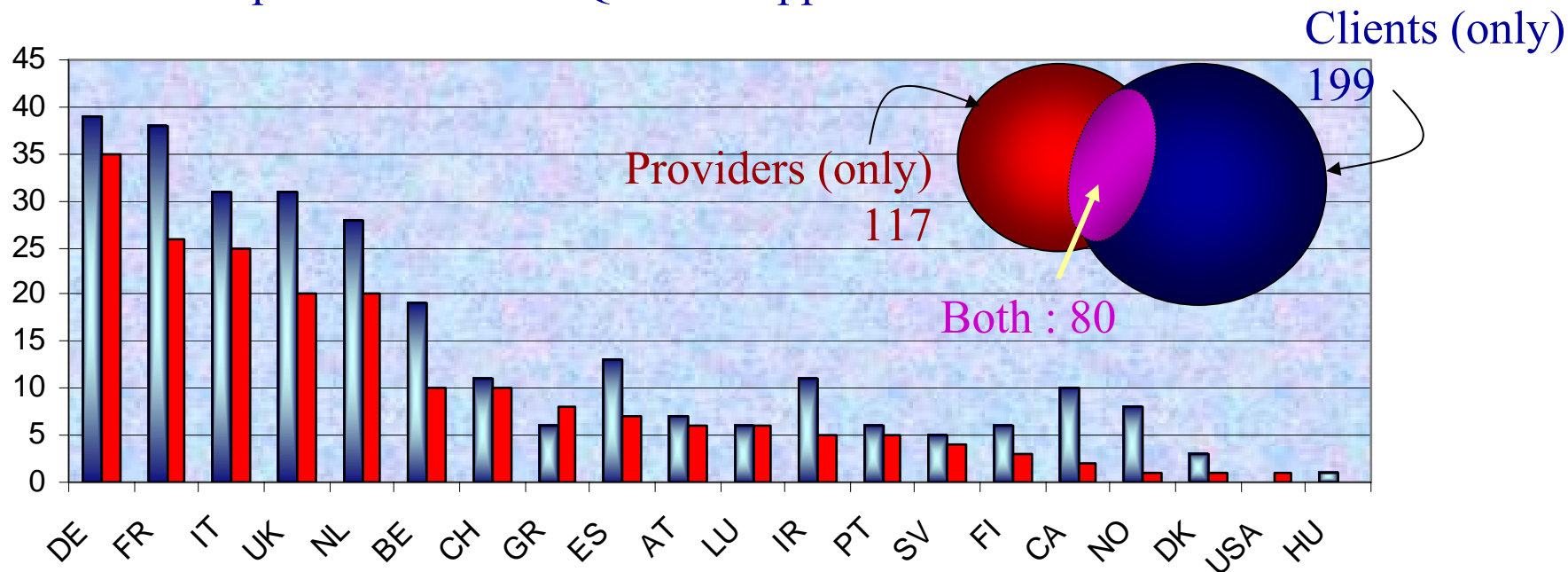
197 Total @ 30/6/06



NB: 1 response ≠ 1 'unit of supply'

Clients & Providers : Respondent Demographics

Distribution of respondents by country, clients v. providers of SineQuaNet support



Assessing (in)adequacy of Supply

How many clients are there?

Assessing the population of concerned SMEs
= SMEs with strong, or marginal, space activity
+
'non-space' SMEs looking to enter space industry

Low-end number of SMEs : ~**1030**

High-end number of SMEs : ~**1255**

Demand, as % of the SME Population

#1 Space engineering
Process Support

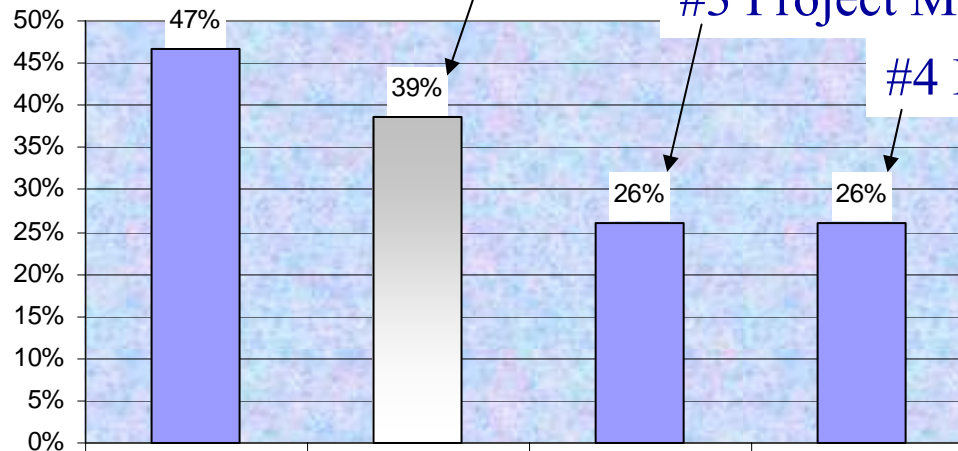
#2 Test/calibration facilities

#3 Project Management

#4 Product Assurance

**% of SMEs
likely to
need support**

**(from SineQuaNet
Survey: precision ±5.9%)**



Space Engineering Process Support

Test services/facilities

Project mngmt support

Product assurance support (top4)

Demand, as # of SME Clients

#1 Space engineering
Process Support

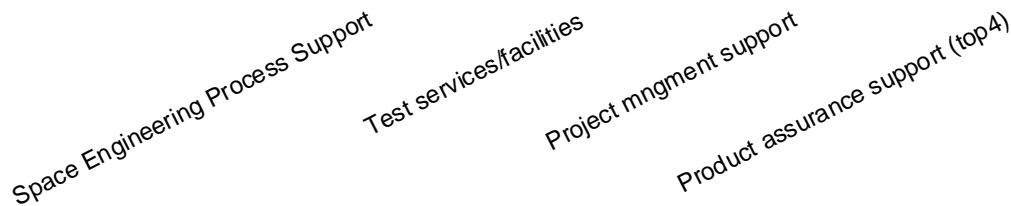
#2 Test/calibration facilities

#3 Project Management

#4 Product Assurance

demand range
(survey precision,
+ other considerations)

of SMEs
likely to
need support

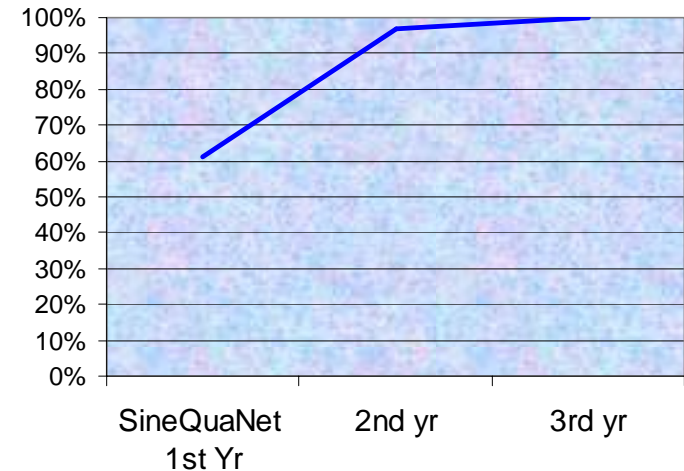


How long have we got?

Expected build-up of overall demand :

Term:	Short (by end year 1)	Medium (by end year 2)	Long (> 2 years)
Demand level:	x 61%	x 97%	x 100%

Expected demand growth curve
(for any service)



Unit of Supply (expertise)

Currently 197 « provider » entries in database

** but ** 1 entry \neq 1 unit of supply

e.g. for delivery of hands-on expertise:

what (typical) effort does it take (or, might we afford!) ?

Estimate used comprises :

- 1 day prior research on client and requirements;
- 2 days travel (to/from client site);
- 3 days hands-on delivery on-site;
- 2 days post-mission debrief to client (e.g. confection of report)

→ **8** Working Days required per Unit of Supply :

MAS – An illustrative example

Manufacturing Advisory Service : financed by DTI, for SMEs

e.g. East Midlands MAS, managed by: 
THE INNOVATION COMPANY

‘... can provide you with practical, hands-on support’

‘... all our support is either free or highly subsidised.’

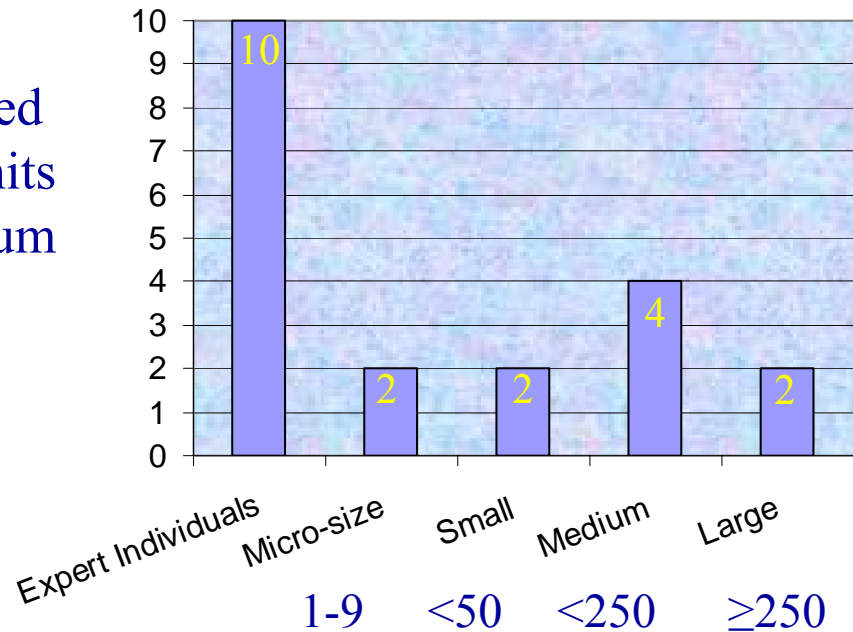
Assistance package comprises :

- 1 day manufacturing review/business assessment (free);
- 10 days (max.) consultancy assistance (subsidised 50%) to:
 - * implement recommendations; * innovation advice;
 - * develop new/more effective products/processes;
 - * implement lean manufacturing techniques/industry best practice

→ **11** Working Days required per (MAS) Unit of Supply

Annual Units of Supply per Organisation Type (expertise)

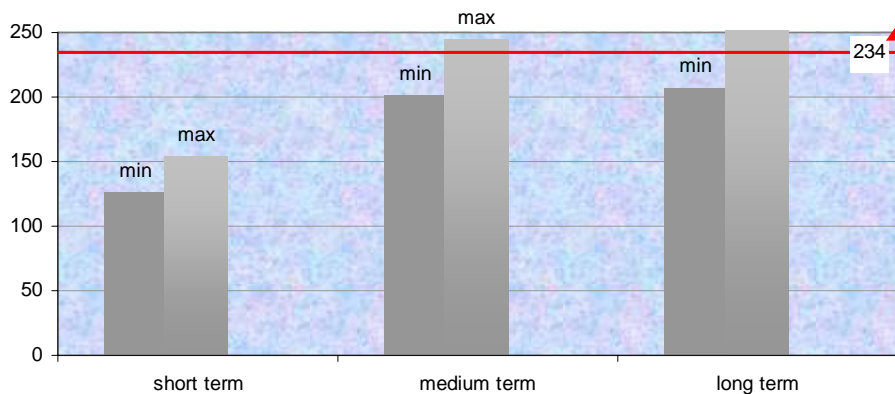
Estimated
Units
Per Annum



of staff in organisation
(enterprise or research institute)

Adequacy of Supply : Experts

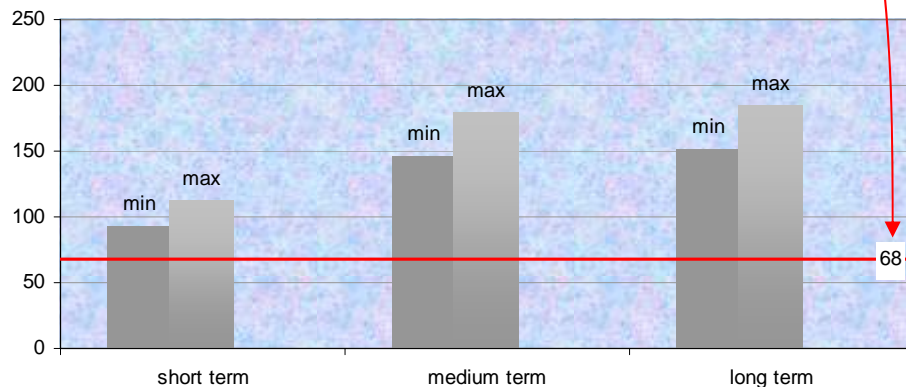
Verification engineering process support



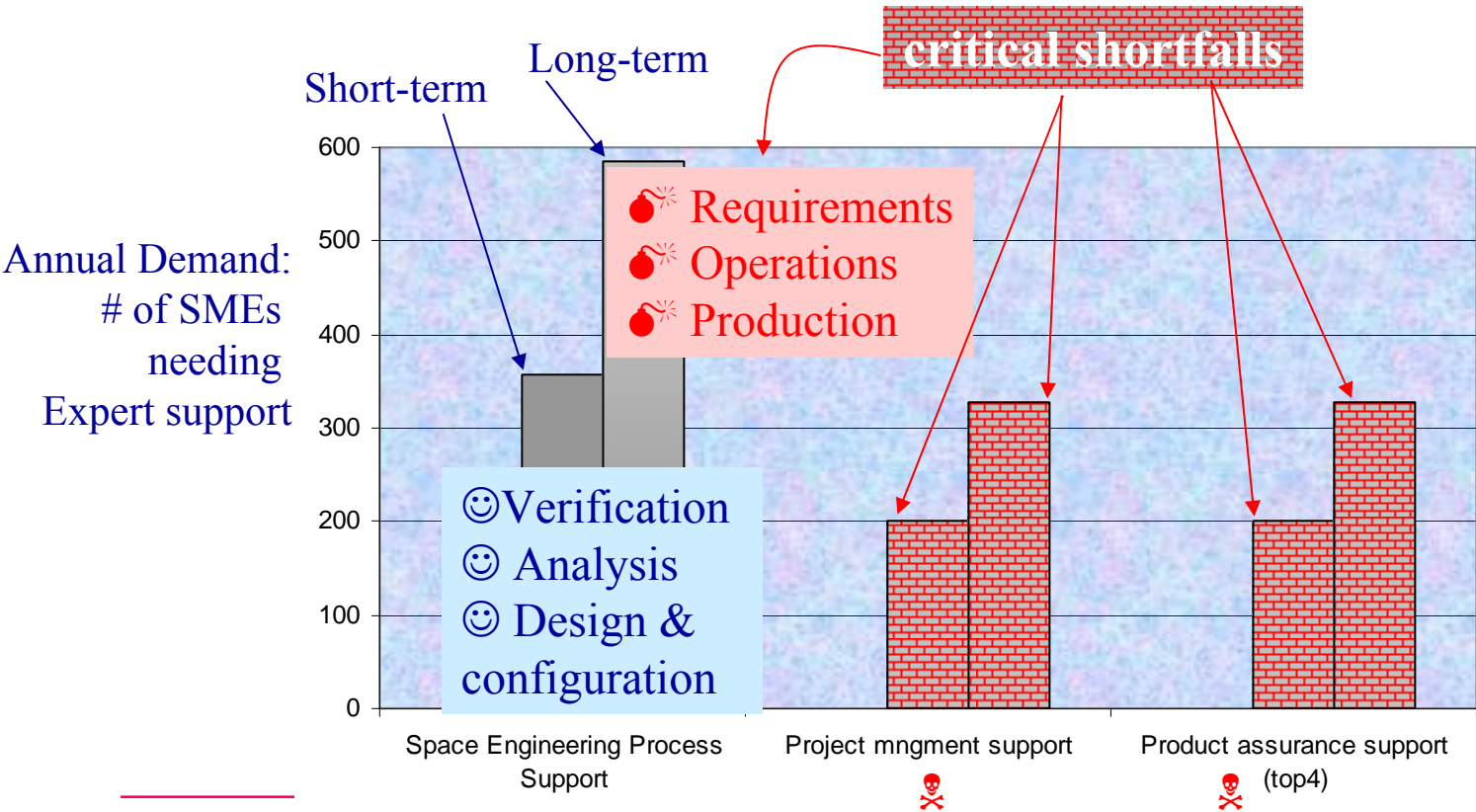
(est.) Annual units of supply
(**expert assistance**)
Based on entries
currently in the database

Annual Demand:
of SMEs for
assistance from experts

Product assurance support



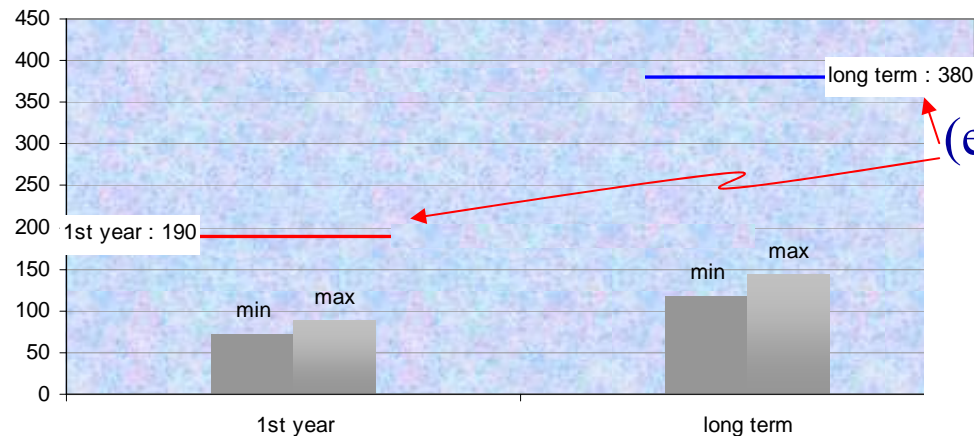
Adequacy/Shortfall of Supply: (expertise)



Adequacy of Supply : Training

Product assurance support

Annual Demand:
of SMEs
for assistance
via training



(est.) units of supply
(training seats)
Based on entries
currently
in the database

N.B.: overall net preference is for **hands-on expert support** ...

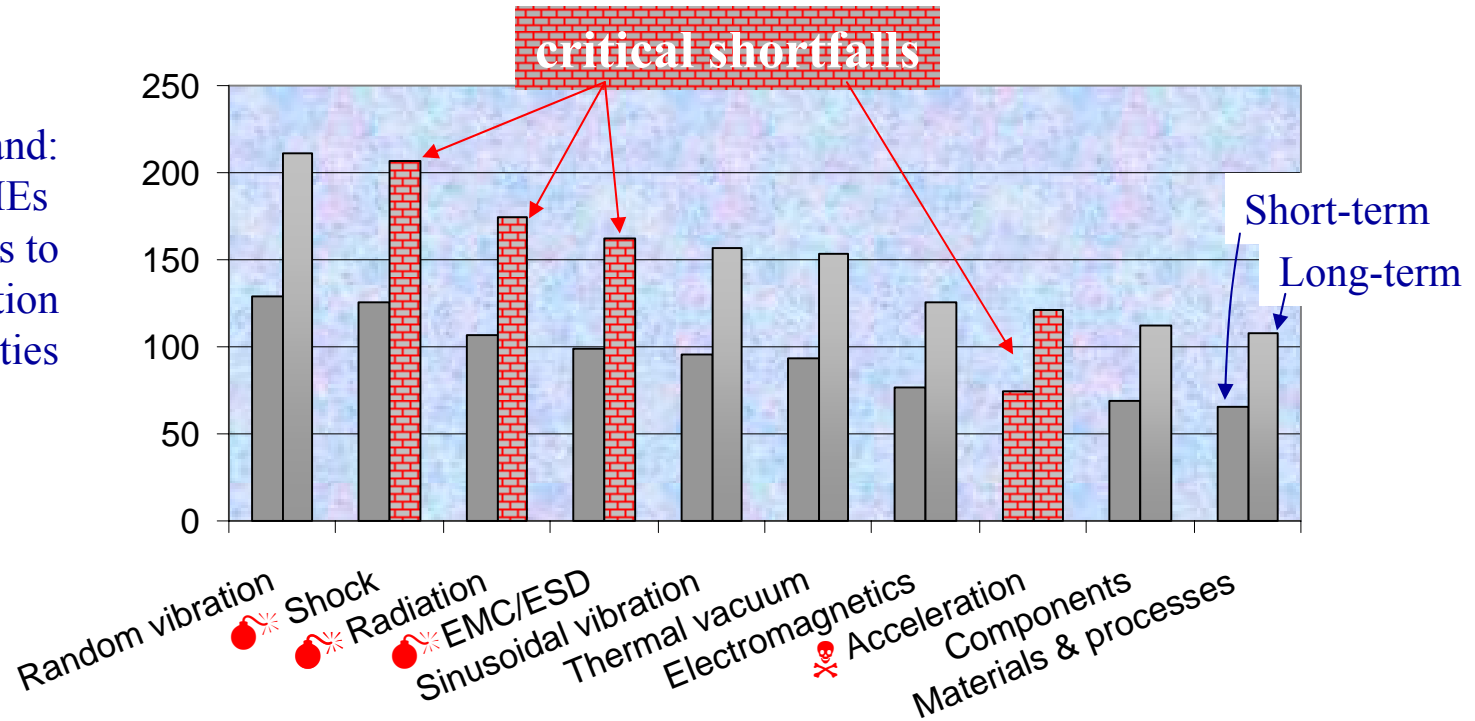
- **but**- supply may not meet demand ...

↳ Prioritisation policy? (e.g. 1st = ongoing projects, etc...)

↳ Fallback = training

Adequacy/Shortfall of Supply: (top 10) Test/Calibration Facilities

Annual Demand:
of SMEs
needing access to
Test & Calibration
Facilities



Assessment based on current sources

Based on estimates

Training:

- all topics : supply generally exceeds projected demand
surplus = fallback : demand for hands-on experts => training

Hands-on Expertise:

- 💣 long-term shortfall in all engineering know-how topics
- 💣 **critical shortfall**, long-term: requirements, operations, production eng.
- 💣 **critical shortfall** short & long term, in
 - ‘project management’ &
 - ‘product assurance’ support

Access to Test & Calibration Facilities:

- 💣 long-term shortfall in some ‘environmental testing’ areas,
- 💣 **critical shortfall**, short & long term, in ‘acceleration testing’

SineQuaNet : moving forward to the business plan

- **continue to collect info (expertise/facilities providers only)**
<http://www.isd2006.com/WP4> see « **questionnaire B** »
- **identify / approach specific provider organisations**
with a view to collaboration
- **implement a database search interface**
for SMEs seeking access to expertise & facilities
- **financing, and legal structure**
- Aiming to have **preliminary business plan** by October 2007