

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 contractual 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%

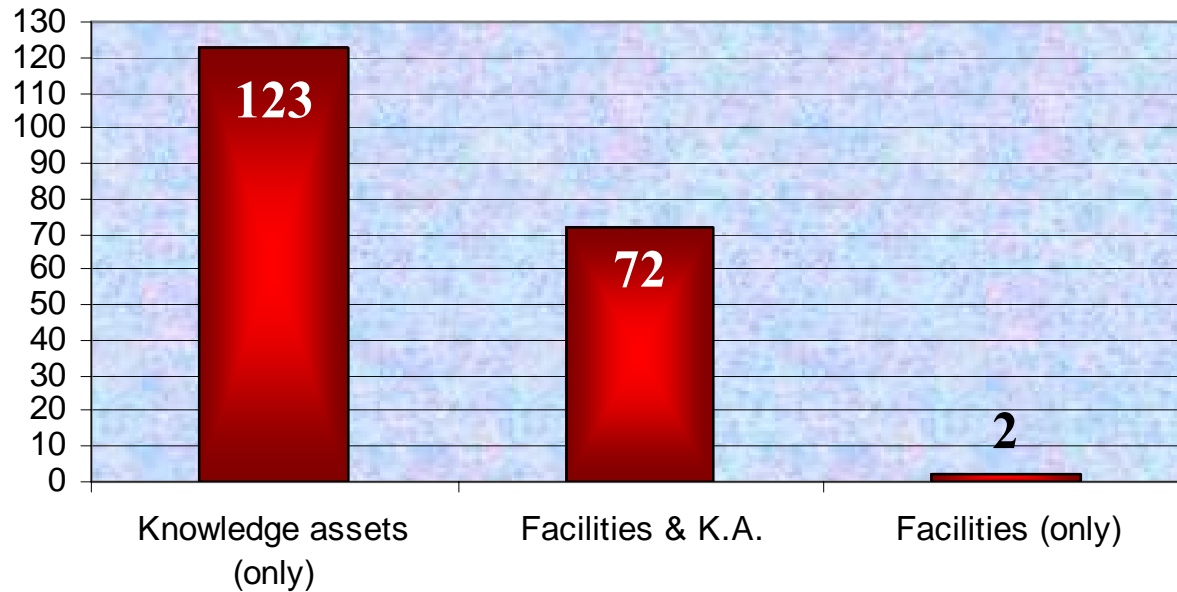
24%

Responses : Knowledge Assets, Access to Facilities

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

of Responses In Database

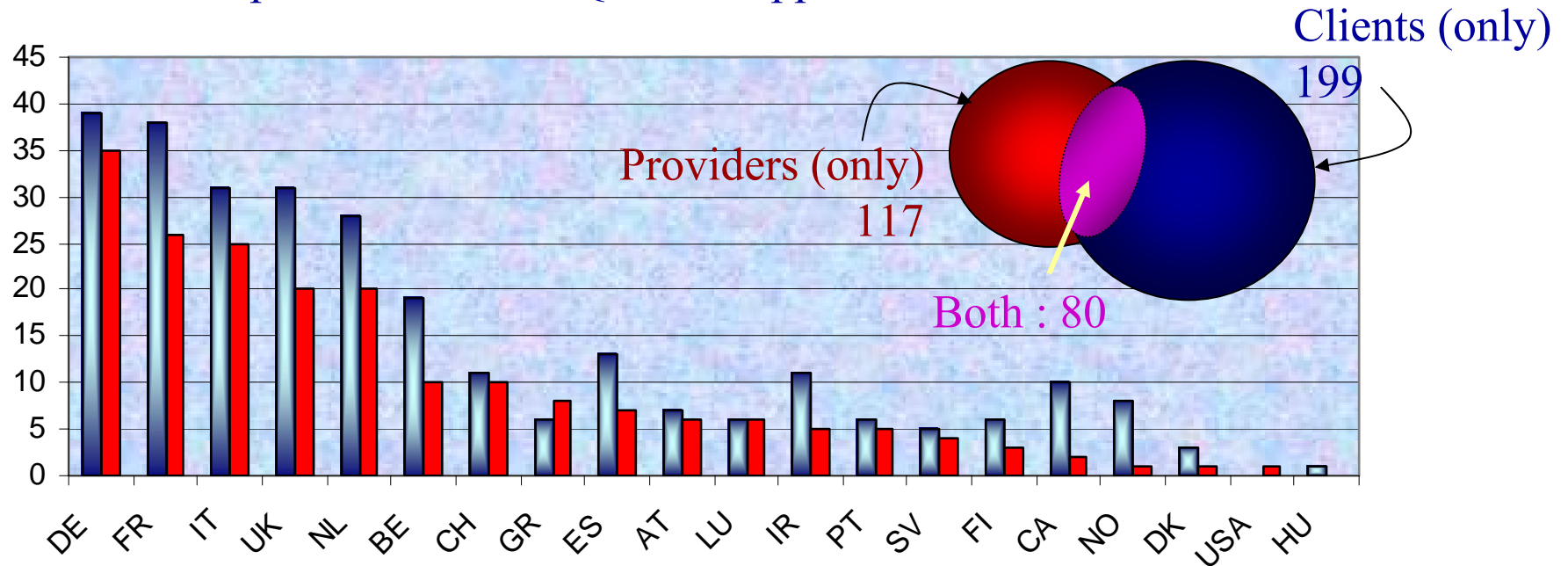
197 Total @ 30/6/06



NB: 1 response \neq 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

Rough estimate of SMEs concerned: **~1300**

Demand, as % of the SME Population

#1 Space engineering

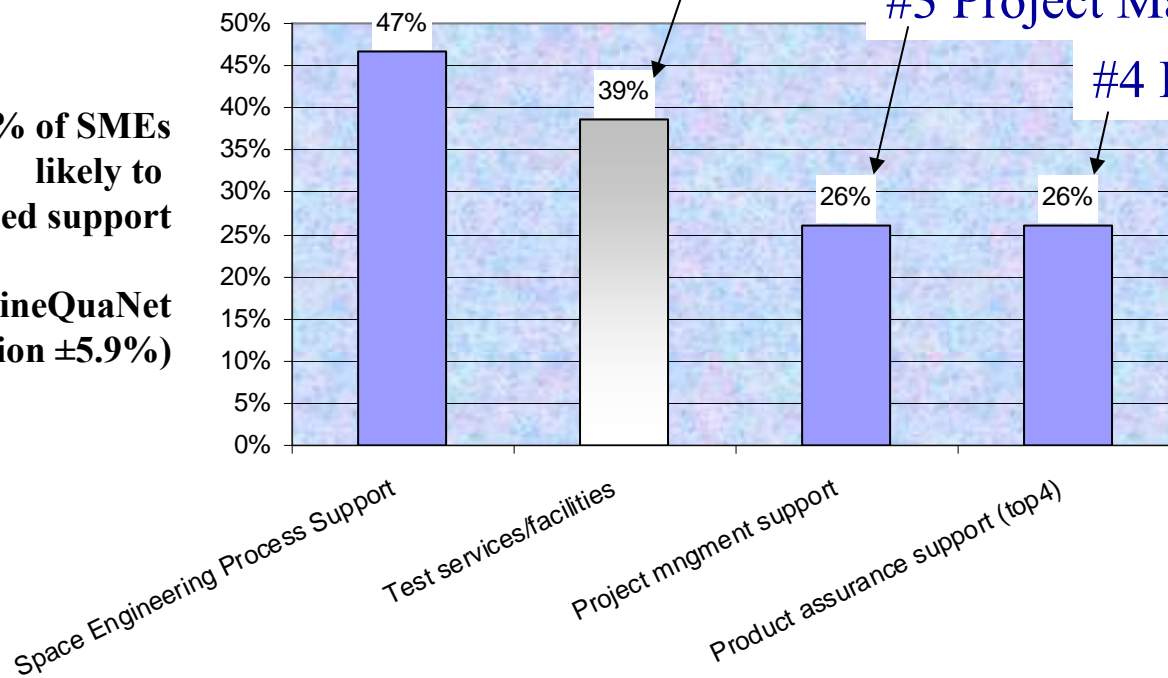
Process Support

#2 Test/calibration facilities

#3 Project Management

#4 Product Assurance

% of SMEs likely to need support
(from SineQuaNet Survey: precision $\pm 5.9\%$)



Demand, as # of SME Clients

#1 Space engineering
Process Support

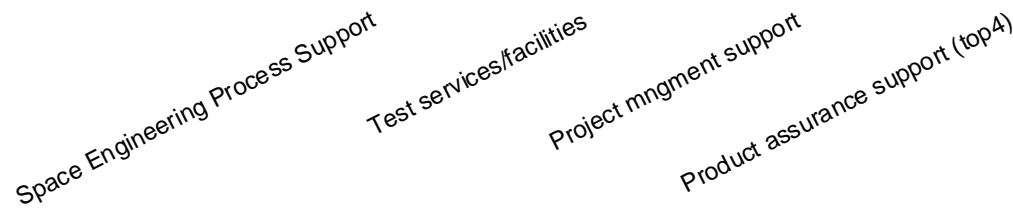
#2 Test/calibration facilities

#3 Project Management

#4 Product Assurance

demand range
(survey precision,
+ other considerations)

of SMEs
likely to
need support

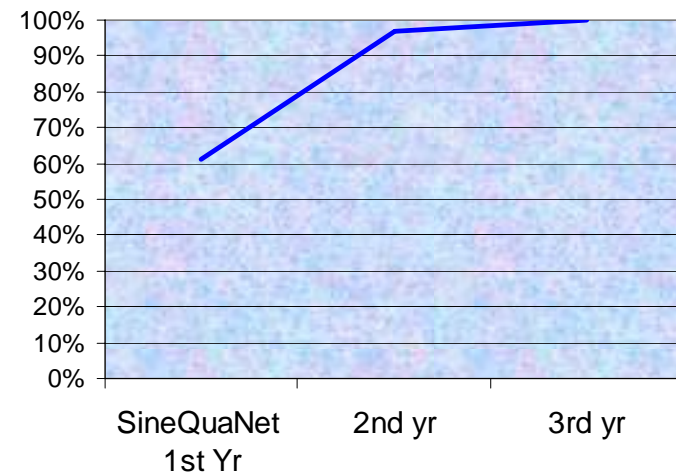


How long have we got?

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: 

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

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

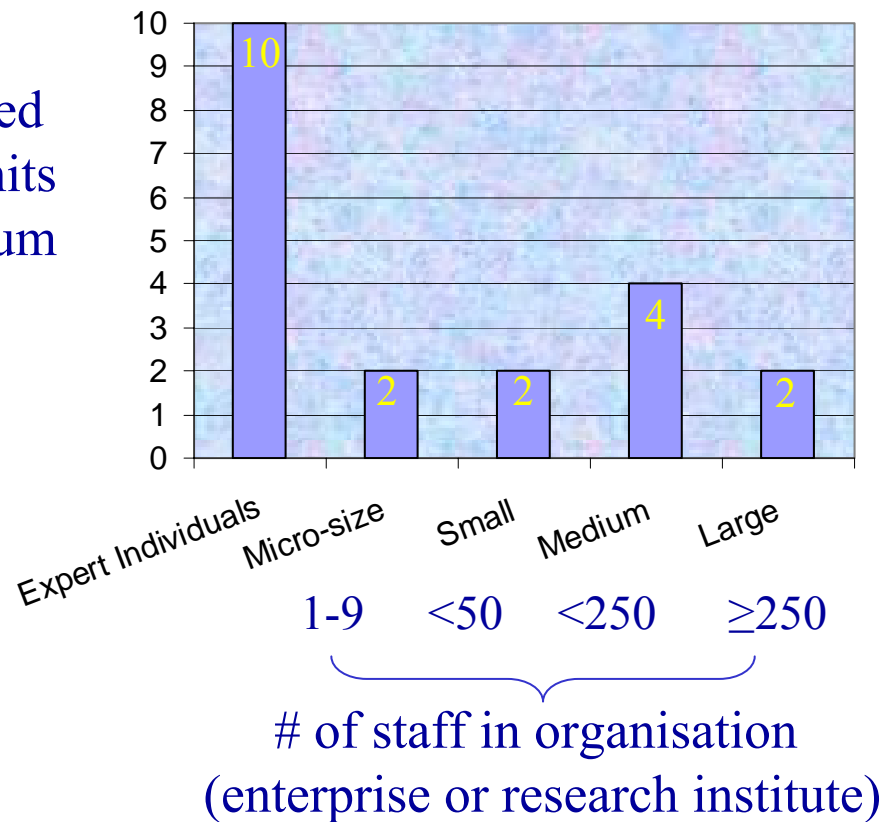
Assistance package comprises :

- 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

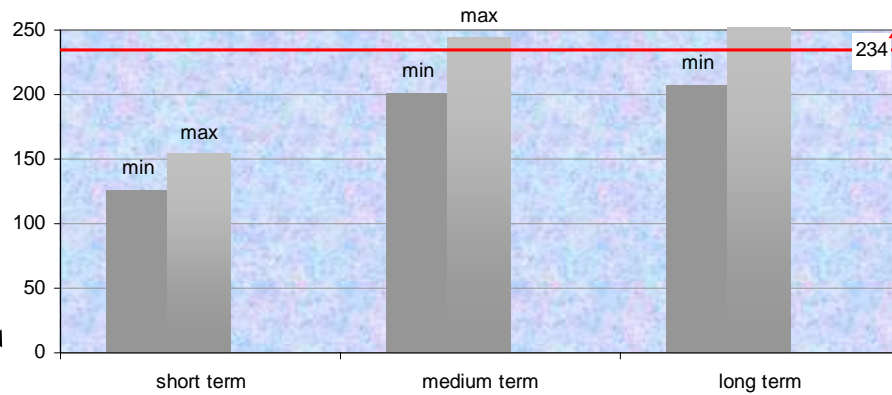
Annual Units of Supply per Organisation Type (expertise)

Estimated
Units
Per Annum



Adequacy of Supply : Experts

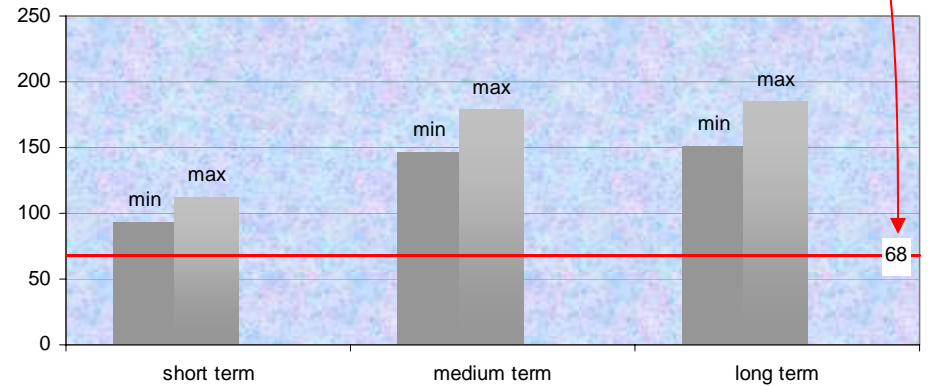
Verification engineering process support



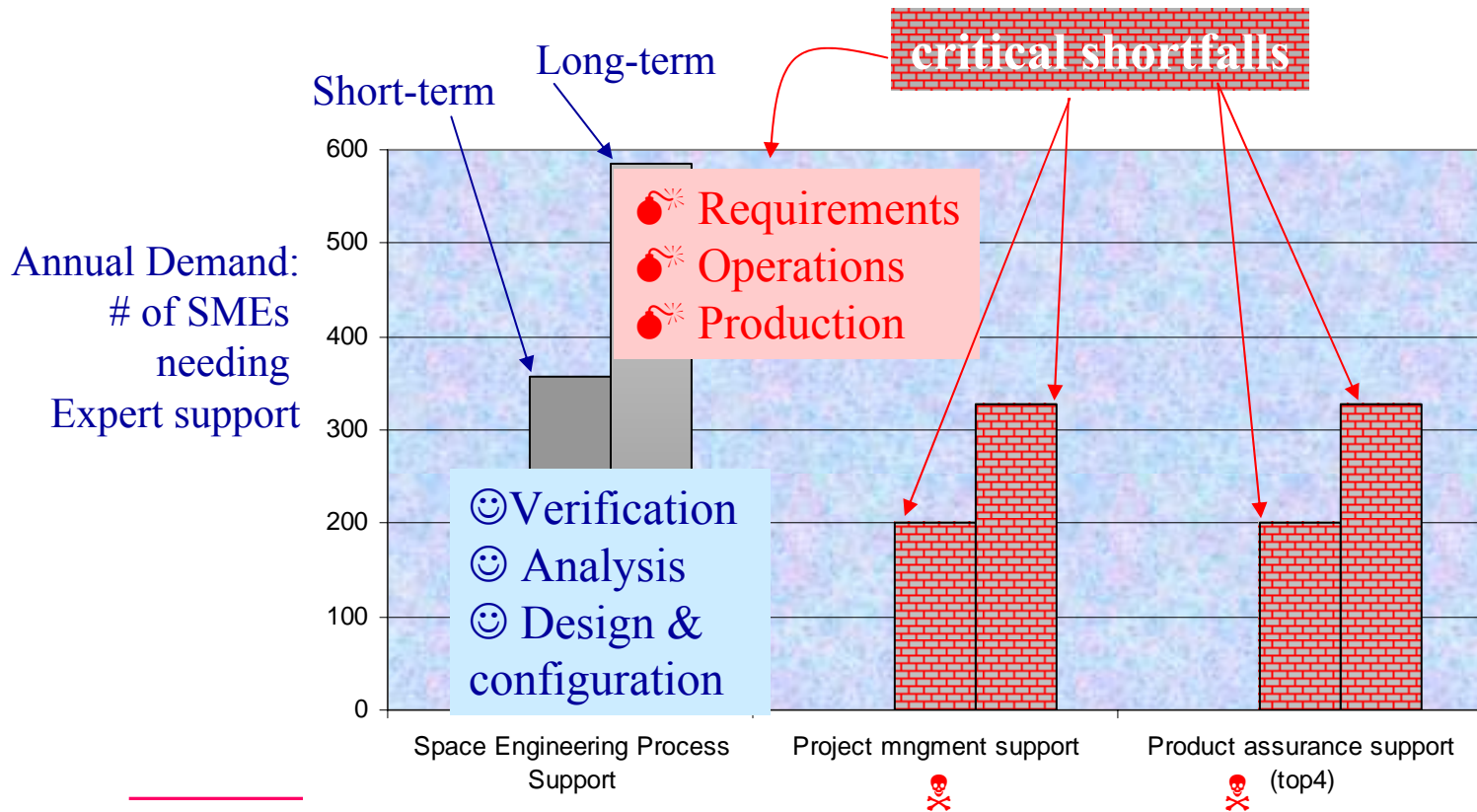
(est.) Annual units of supply
(expert assistance)
Based on entries
currently in the database

Annual Demand:
of SMEs for
assistance from experts

Product assurance support



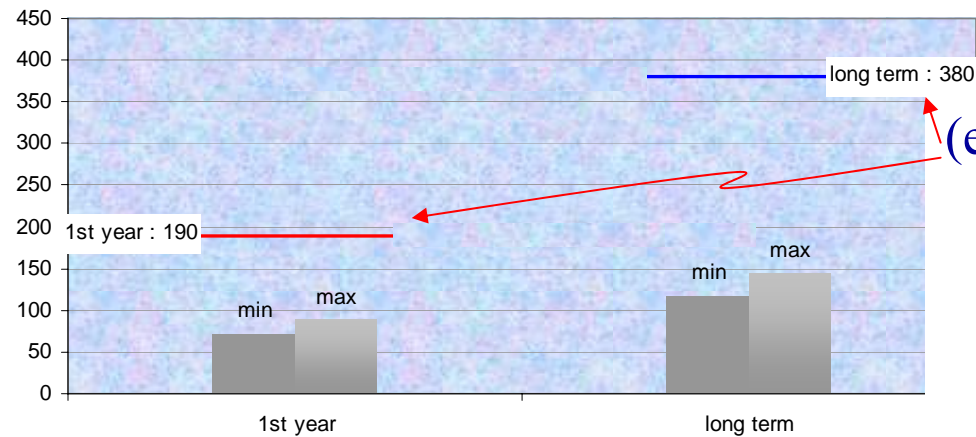
Adequacy/Shortfall of Supply: (expertise)



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** ...

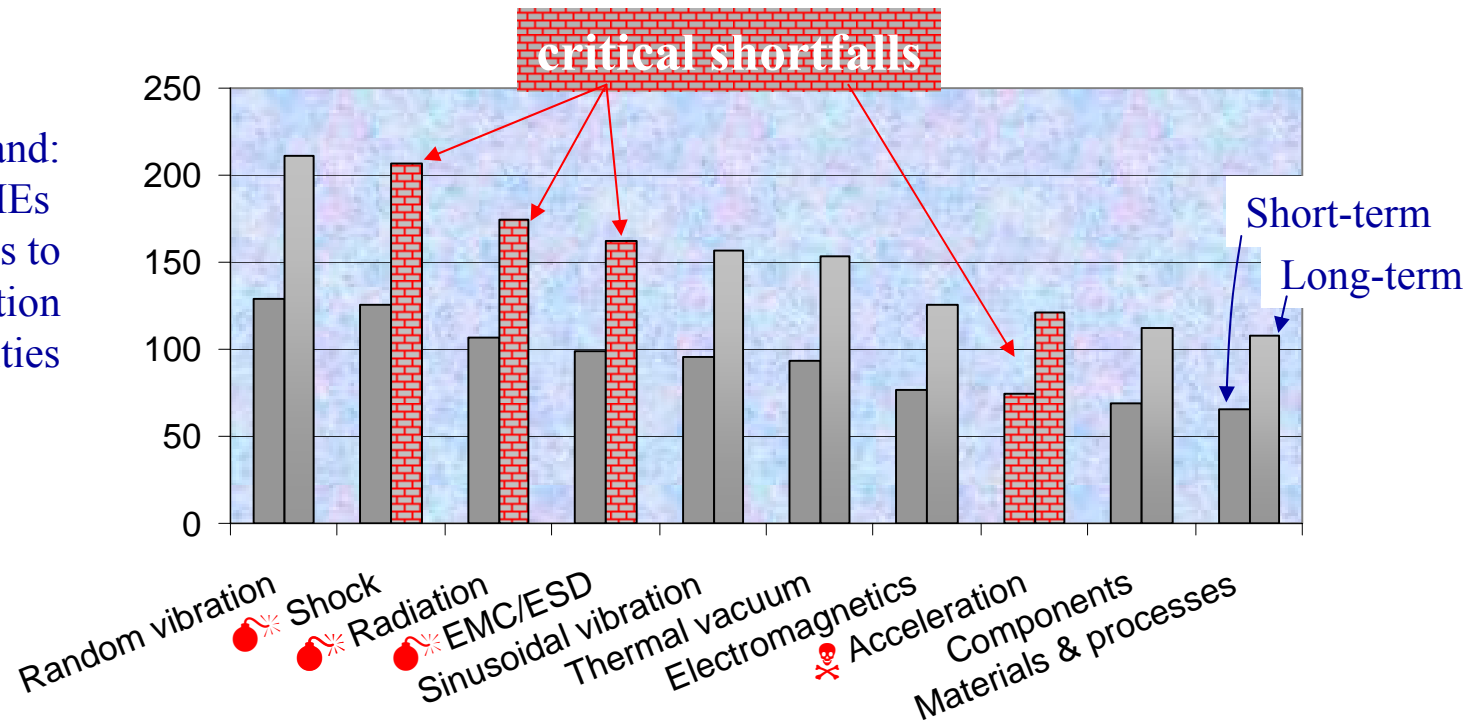
- **but**- supply may not meet demand ...

↳ 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