AMMRL Survey: NMR Facility Business Models & Funding Mechanisms

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- equipment, rates, contacts, etc.

Unofficial website:

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- facility photos & scale diagrams/layouts
- photos of installed cold probe
- user guides ("Gray Boxes")
- results of this survey
Questions

• Facility Type/Operational model
  • public or private institution?
  • department? interdepartment organization?
  • part of a broader core facility?
  • do you offer service? for a fee?

• Expenses (*Including your own salary + benefits*)
  • what fraction goes to personnel
  • what fraction goes to cryogens? repairs? equipment?...

• Revenue
  • what fraction comes from user fees?
  • from institution? department?
  • from PI grants? other?

• Overhead - how much does your institution charge?
Average Expenses

N=45
4/20/06

- salary+benefits: 63%
- cryogens: 12%
- repair: 10%
- service contracts: 4%
- equipment: 3%
- travel: 2%
- supplies: 5%
- other: 1%
- supplies: 5%
- other: 1%

Total: 100%
Average Expenses

(± standard deviations)

N=45
4/20/06

salary+benefits 63% ± 20%
supplies 5% ± 15%
other 1% ± 3%
cryogens 12% ± 12%
repair 10% ± 10%
service contracts 4% ± 10%
equipment 3% ± 6%
travel 2% ± 2%
other 1% ± 3%

N=45
4/20/06
Average Expenses
(± standard deviations)

- salary+benefits: 63% ± 20%
- supplies: 5% ± 15%
- travel: 2% ± 2
- equipment: 3% ± 6%
- service contracts: 4% ± 10%
- repair: 10% ± 10%
- cryogens: 12% ± 12%
- other: 1% ± 3%

- Personnel costs are the major fraction
- Others vary with relatively high standard deviations
- Service contracts
  - 35/45 spent $0
  - 9 allotted between 2 & 30% of their budget
  - Primarily to cold probes

N=45
4/20/06
% Manager Salary covered by recharge

- $0 \leq x < 5$: 0%
- $5 \leq x < 10$: 4%
- $10 \leq x < 20$: 6%
- $20 \leq x < 30$: 16%
- $30 \leq x < 40$: 2%
- $40 \leq x < 50$: 2%
- $50 \leq x < 60$: 2%
- $60 \leq x < 70$: 6%
- $70 \leq x < 80$: 0%
- $80 \leq x < 90$: 0%
- $90 \leq x < 100$: 4%

N=50 4/20/06
88% of facilities recover less than 50% of manager costs through user fees.
Average Revenues

- User fees/recharge: 28%
- Department: 35%
- Institution: 27%
- PI grants: 6%
- Other: 4%

N=50 4/20/06
Average Revenues
(± standard deviations)

N=50  4/20/06

department
35% ± 40%

institution
27% ± 32%

PI grants
6% ± 18%

user fees/recharge
28% ± 26%

other
4% ± 11
Average Revenues
(± standard deviations)

- user fees/recharge: 28% ± 26%
- department: 35% ± 40%
- institution: 27% ± 32%
- PI grants: 6%
- other: 4%

 cautioned: AVERAGES ARE USELESS!
Major Funding Sources

- **Percent contribution**
  - =0
  - 0<x≤2
  - 2<x≤5
  - 5<x≤10
  - 10<x≤20
  - 20<x≤30
  - 30<x≤40
  - 40<x≤50
  - 50<x≤60
  - 60<x≤70
  - 70<x≤80
  - 80<x≤90
  - 90<x≤100

- **Facilities in range**
  - fees
  - department
  - institution

N=50
4/20/06
"12 facilities covered 0% of their expenses using recharge fees"
"12 facilities covered 0% of their expenses using recharge fees"

"4 facilities covered between 60 and 70% of their expenses using department funds"
Few are funded from one lone source
Virtually all are funded by a combination of two of the three major funding sources
Some places are just more expensive than others
University Support vs. Grant Overhead

Higher overhead translates to lower support

y = -0.3521x + 43.12

$R^2 = 0.0041$
Higher overhead translates to lower support
Action

- Average university overhead in 2005 *(Chron Hi Ed, Aug. 5 2005)*
  - "top" 100 research institutions: 51.8%
  - public universities: 49.1%
  - private universities: 56.7%

- Small dependence on fees and below-average overhead?
  - sit tight & tell faculty how lucky they are
- High fees and low overhead (or vice versa)?
  - accept the tradeoff
- High dependence on fees & high overhead?
  - determine how much department is funded from overhead charges
  - seek equitable funding from whichever entity (univ. or department) benefits from overhead revenue

- Charge for service, including "collaboration"
  - Interpretation is more valuable than data collection, so charge (more) for it