

Packaging Automation Survey Results

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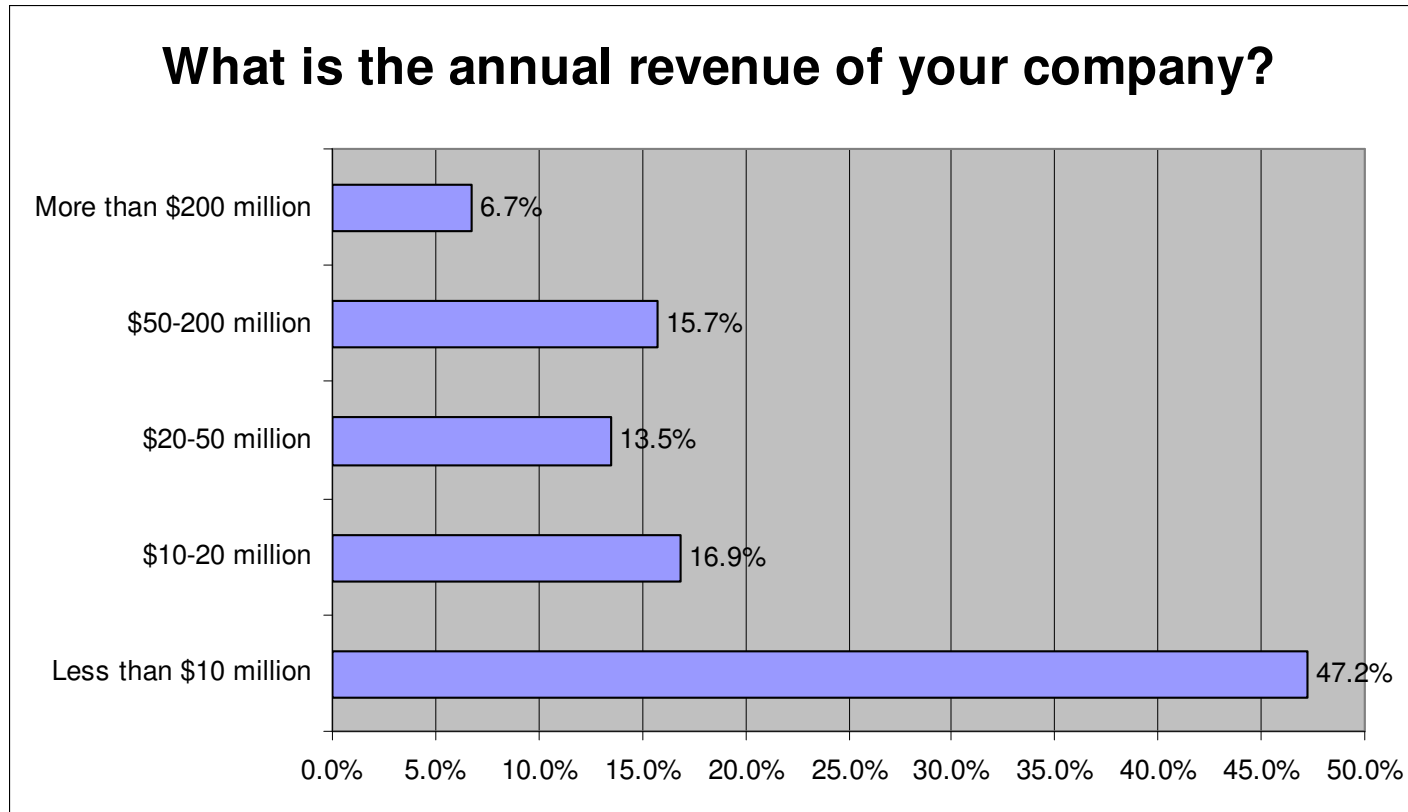
About the Packaging Automation Survey

- Development of Survey Joint Effort
 - OMAC
 - Packaging World
- Survey Solicitation
 - Packaging World/Automation World
 - OMAC
 - PMMI
 - UCIMA
- Two Sets of Questions in Survey
 - Suppliers of Packaging Machinery (89 respondents)
 - Buyers of Packaging Machinery (168 respondents)



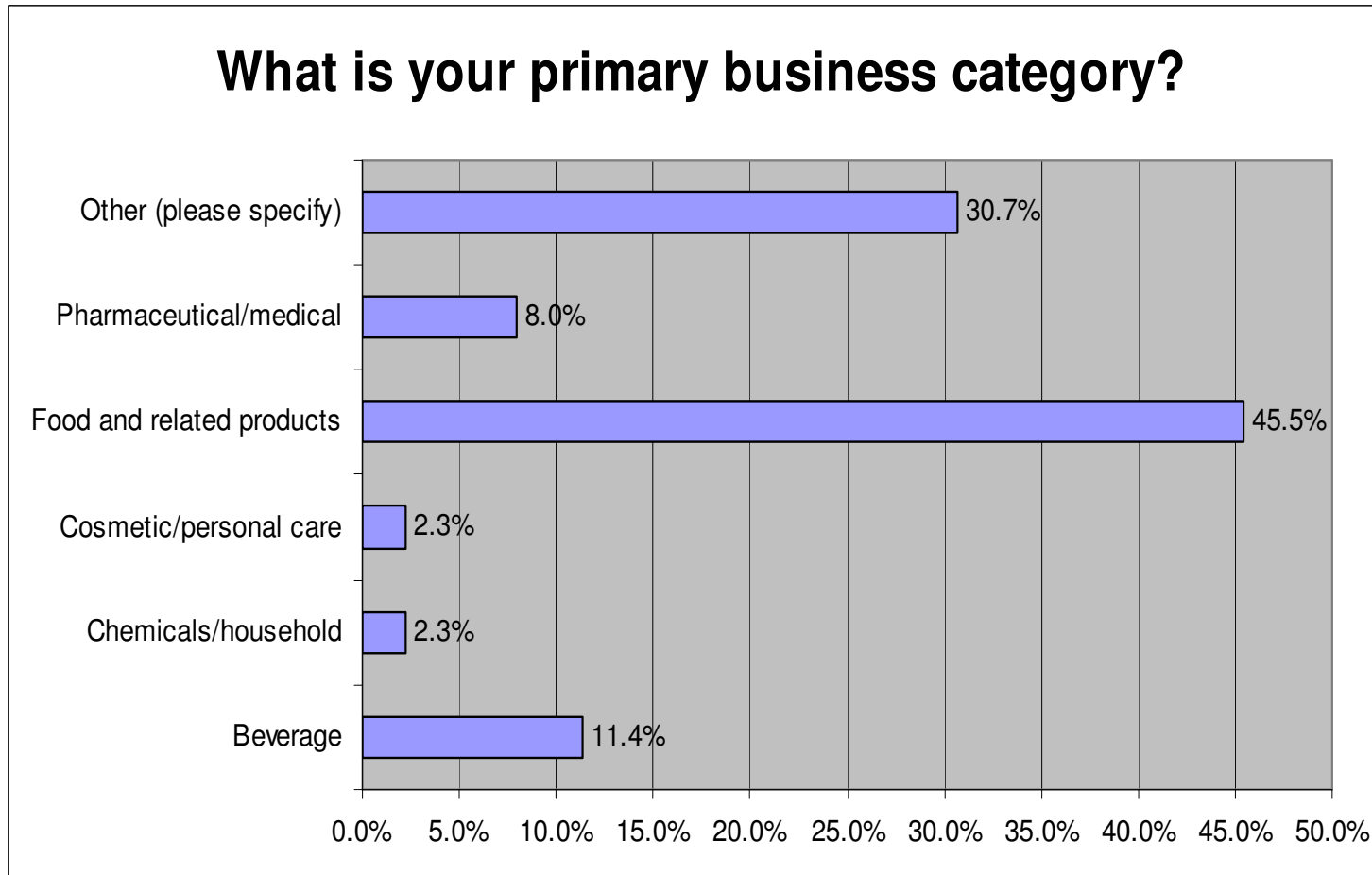
Supplier

Annual Revenue



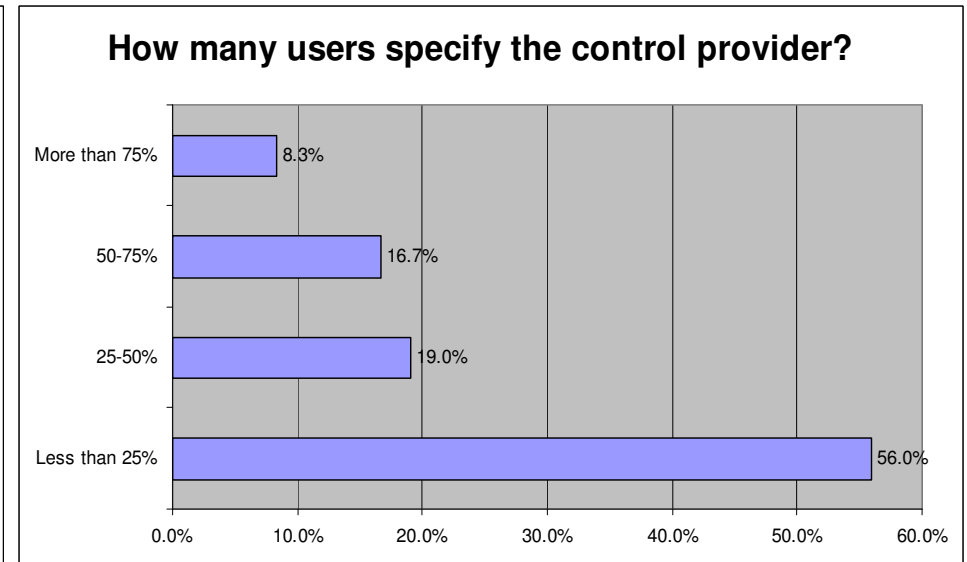
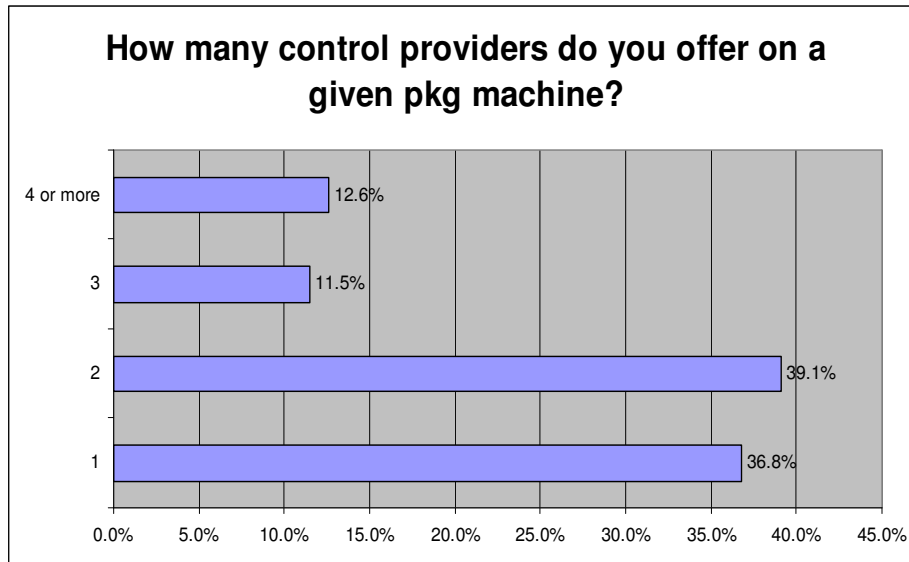
Supplier

Business Category



Supplier

Control Providers



Suppliers will try to use as few control providers as necessary

“Buyers don’t realize the benefits they gain from the expertise we have with our preferred controls package”



Supplier

Criteria for Choosing Control Supplier

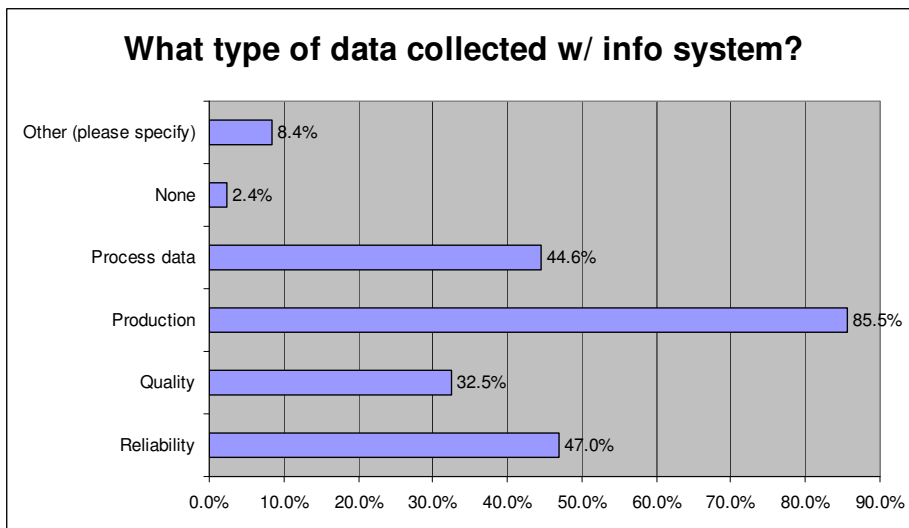
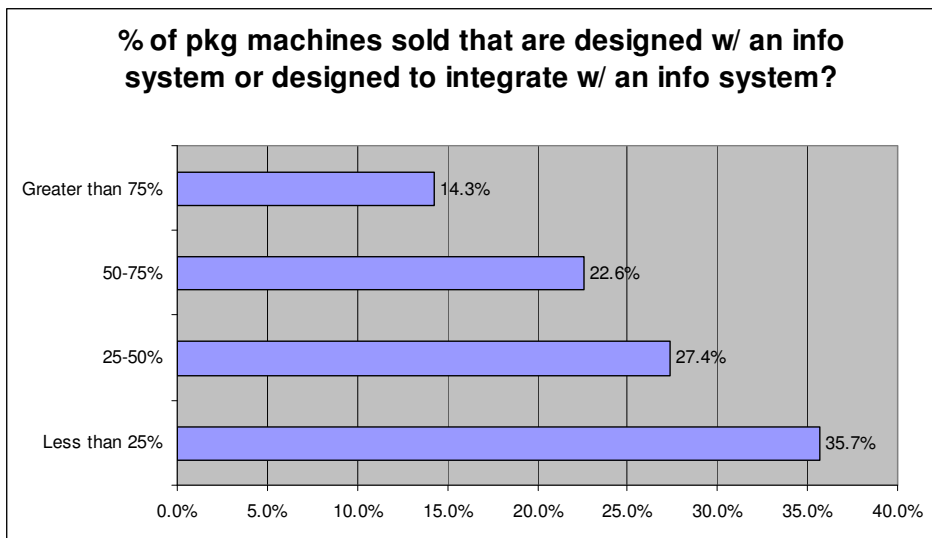
Rank Order of Criteria

1. Logic Control Capability
2. Ability to Integrate
3. Cost
4. Control Provider Users Ask for
5. Servo Capability
6. Ability of Control Provider to Support



Supplier

Information System

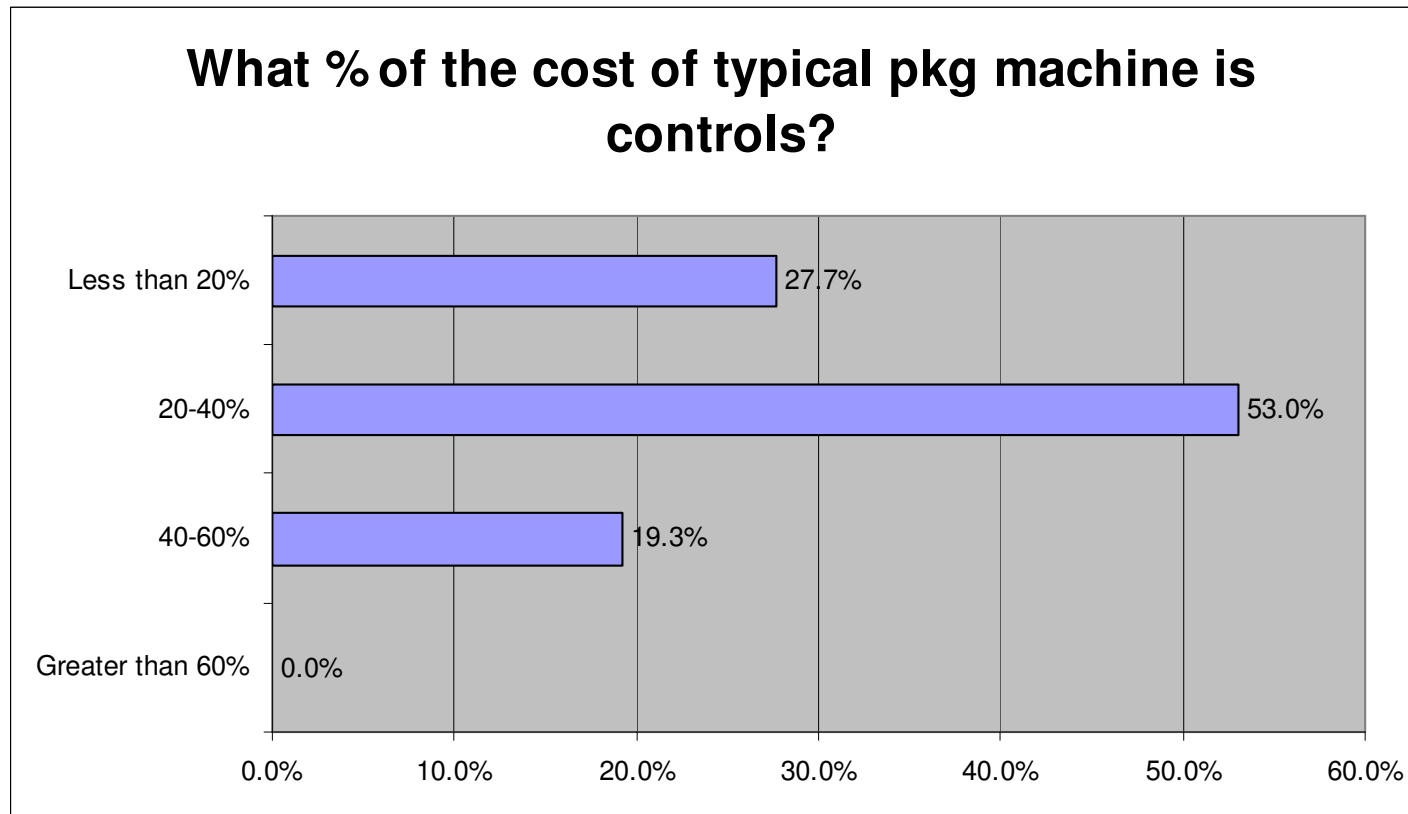


Production data – pretty simple to implement

Reliability – missed opportunity for big payout on many machines



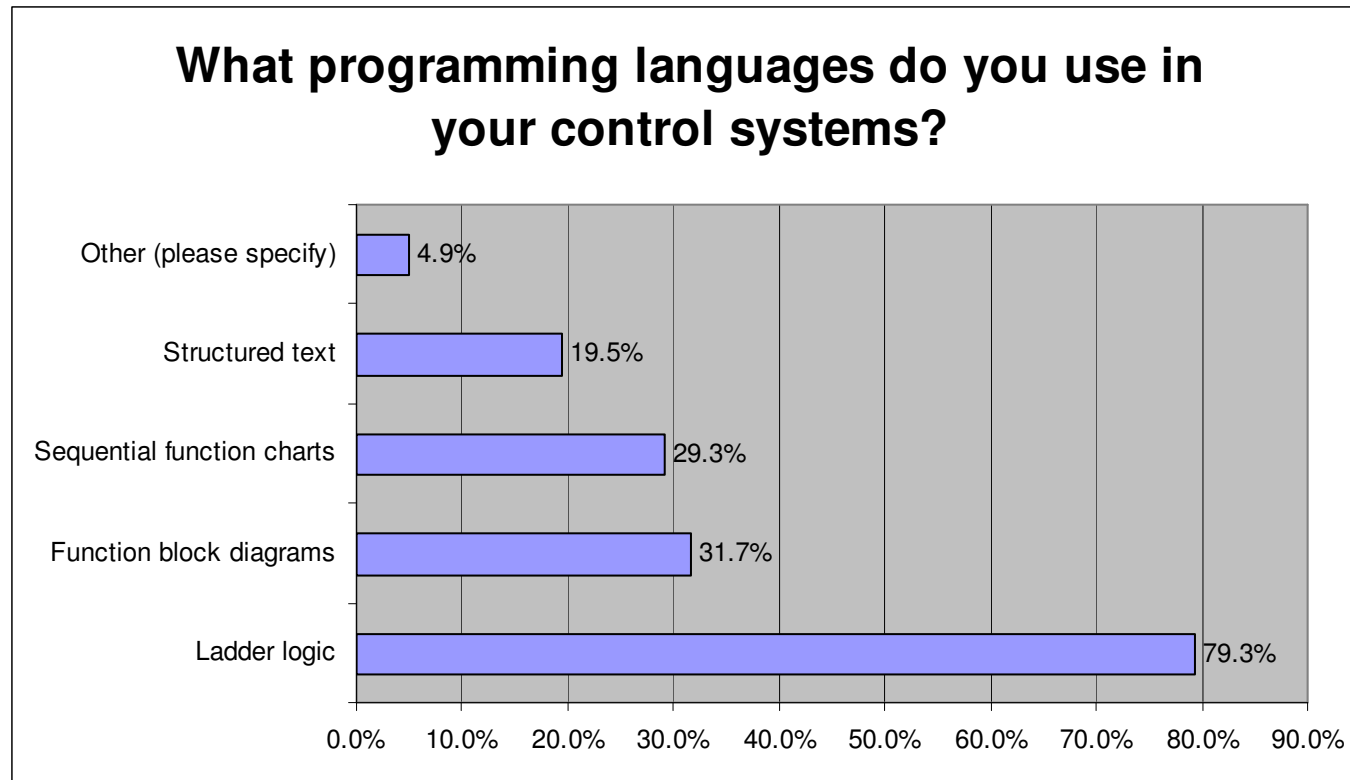
Supplier % Machine Cost is Controls



Controls is a significant portion of most machines



Programming Languages



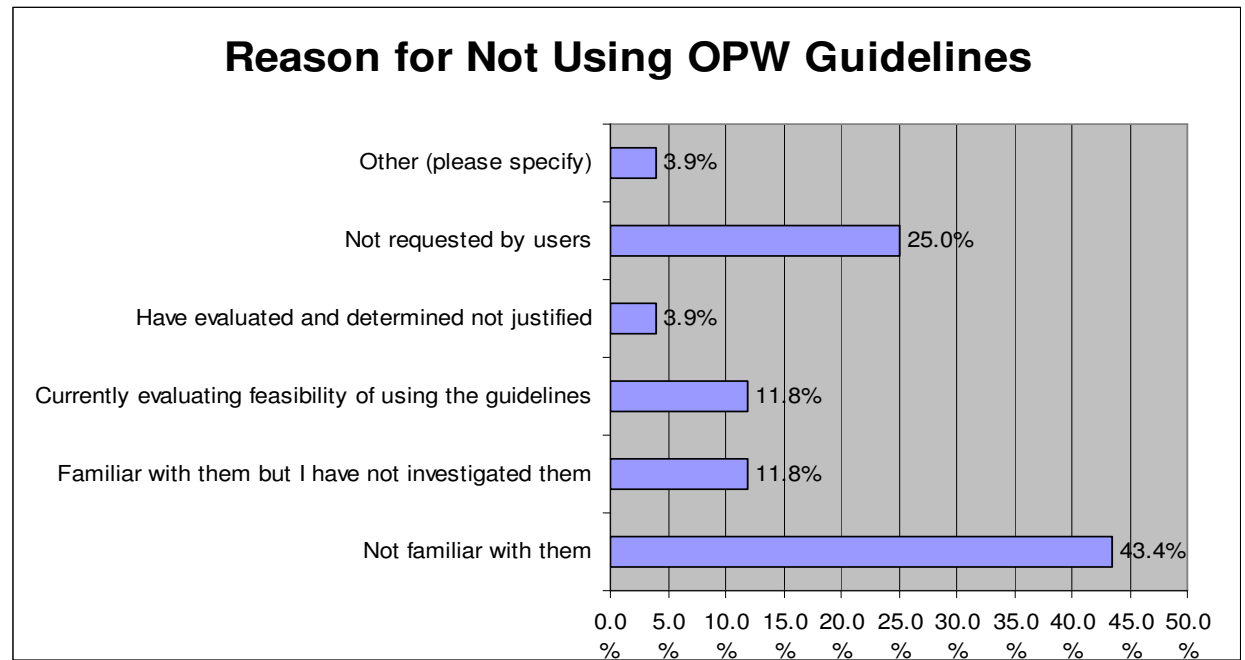
Benefits of other programming languages (besides ladder) are not being leveraged on most packaging machines



Supplier **OMAC Packaging Guidelines**

Do you implement any of the OMAC Packaging Guidelines on your packaging machines?

Yes	25%
No	75%



- OMAC Packaging Guidelines become more important as packaging lines:
 - Are networked together
 - have information systems
 - are tied to ERP systems
- Need to get the word out on the OMAC Packaging Guidelines and the benefits



Supplier

Desired Capabilities

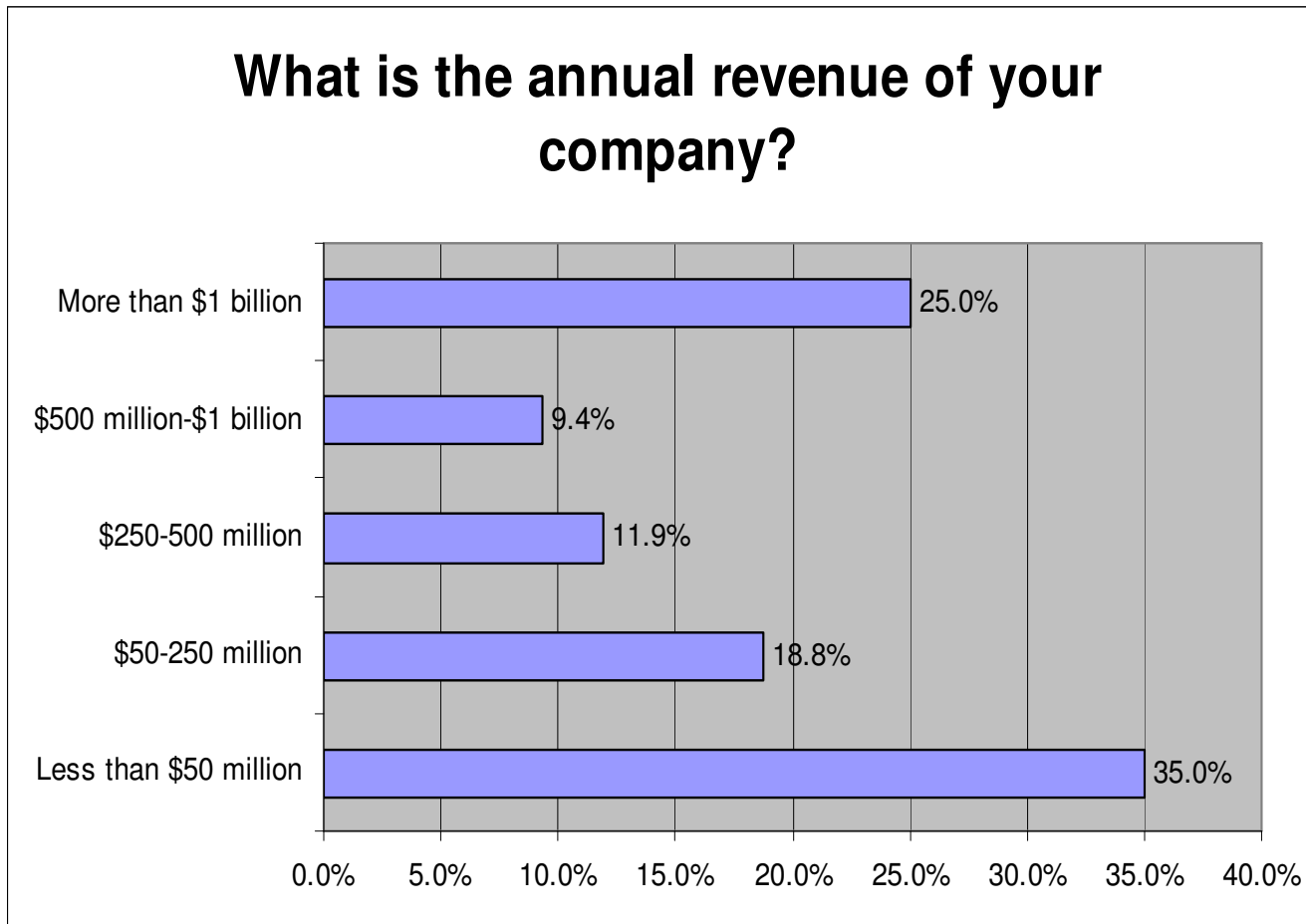
Ability for maintenance technicians to maintain and diagnose controls systems regardless of system vendor	2.46
Ability to access machine diagnostic data	2.42
Ability to have a consistent software structure in all packaging machines regardless of the OEM	2.36
Ability to connect all sensors actuators and controllers within a packaging machine by using an industry-standard network	2.26
Ability to create applications from a library of reusable software modules	2.23
Ability to access product performance data	2.18
Ability to connect multiple vendors' drives to a single controller on an industry-standard network	2.16
Having a standard and consistent machine state operating model regardless of machinery OEM	2.13
The development of nationally recognized qualifications for technical staff involved in packaging machinery automation	1.94
Ability to leverage the benefits inherent in IEC 61131-3	1.77

Diagnostics & support is a top priority
“Customer skills from maintenance point of view”



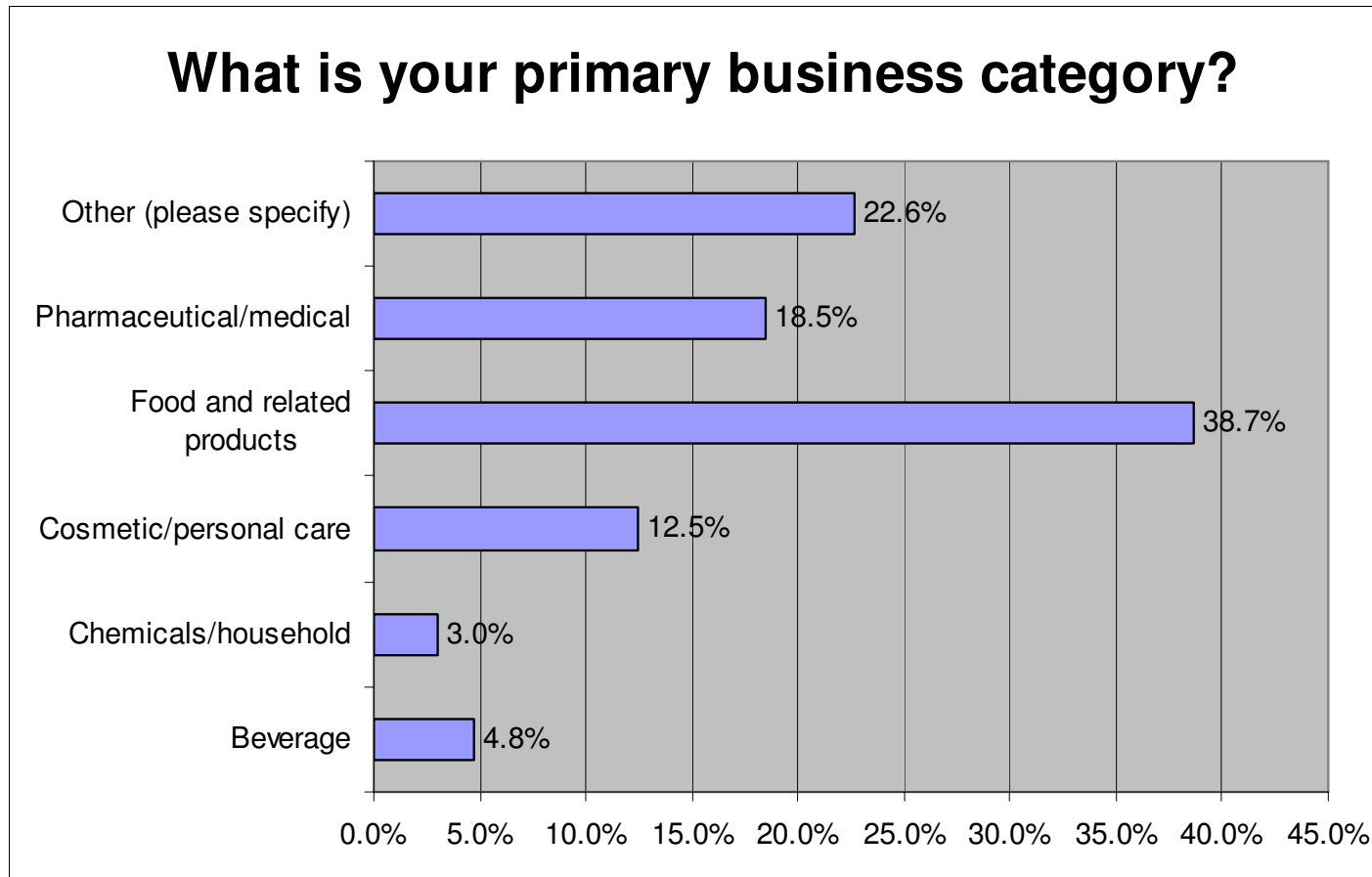
Buyer

Annual Revenue

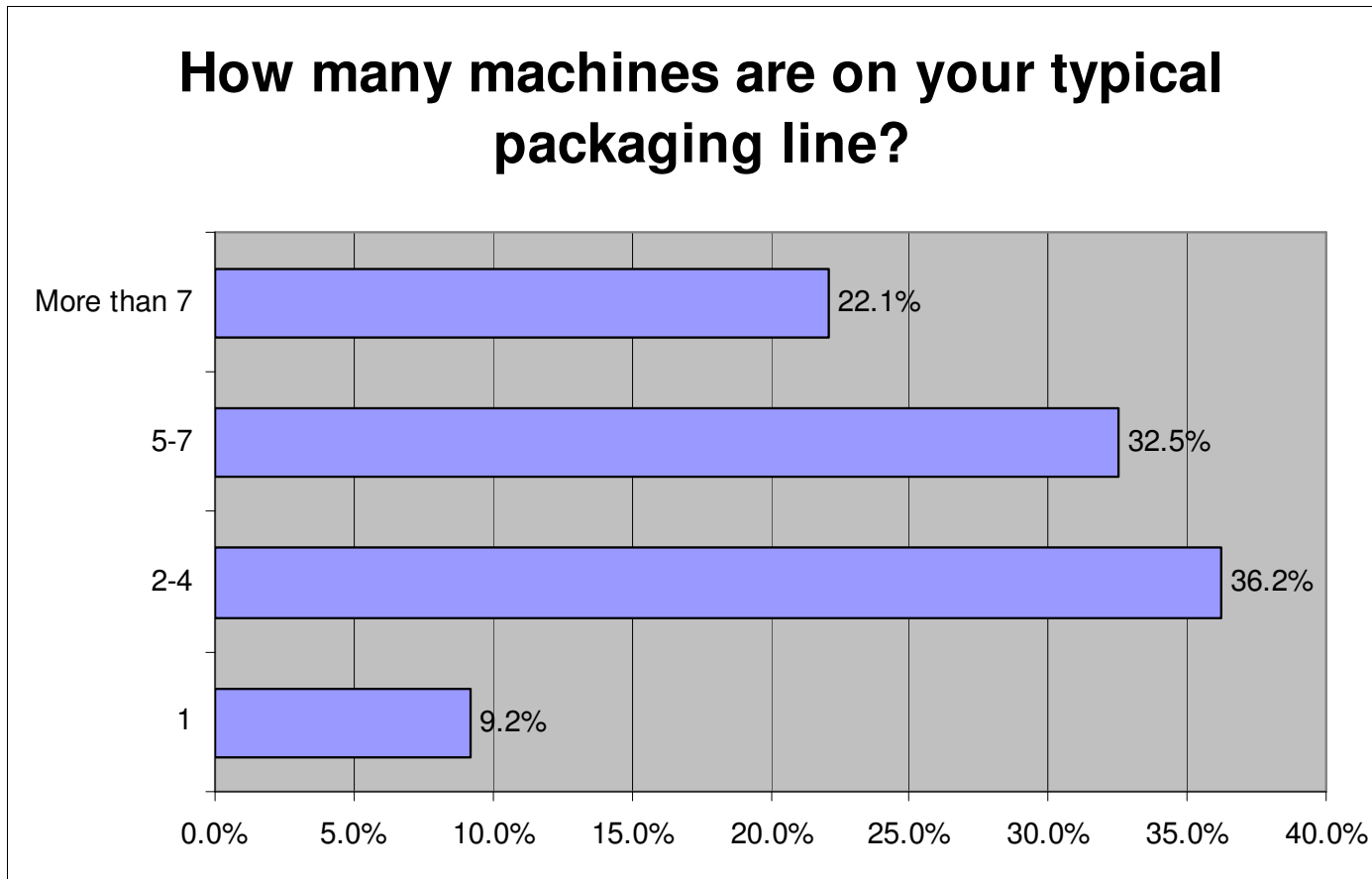


Buyer

Business Category



Buyer No. Machines/Packaging Line

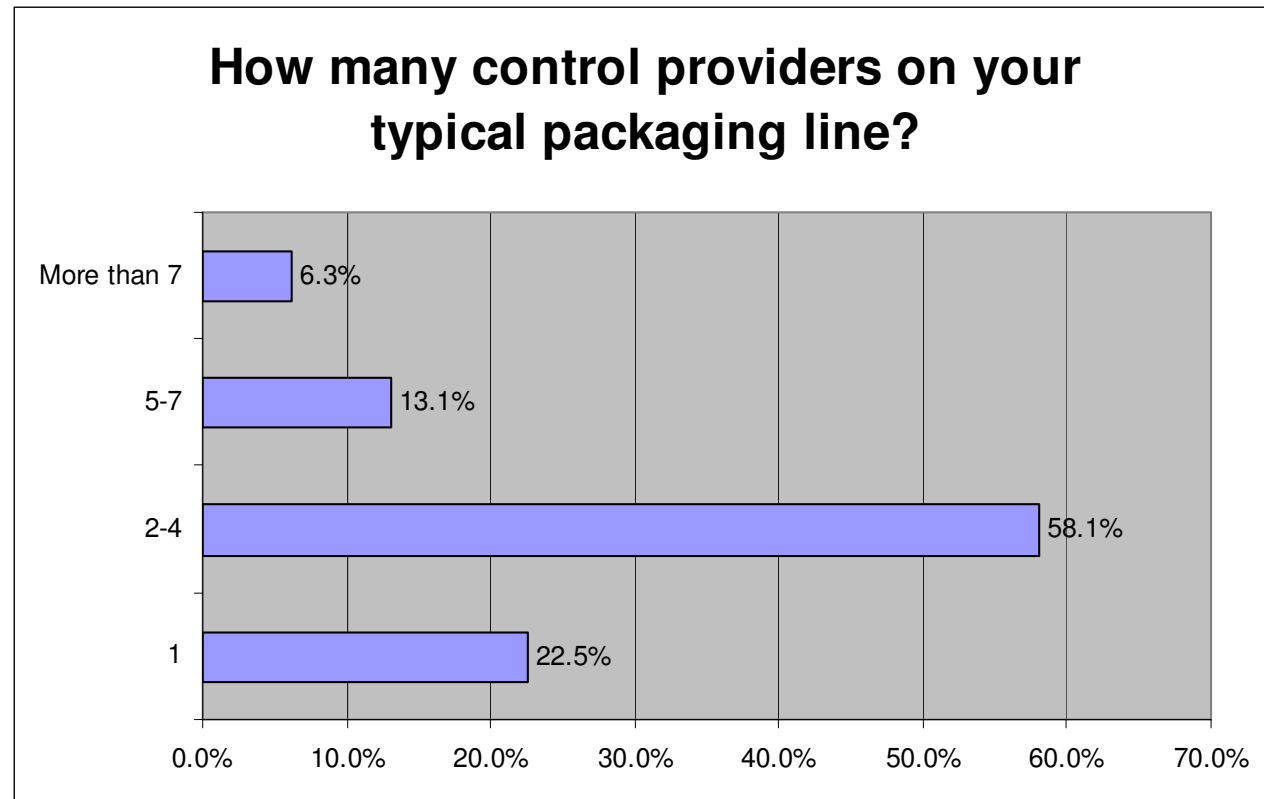


Buyer

Control Providers

Do you specify to the packaging machinery OEM the control provider you want them to use?

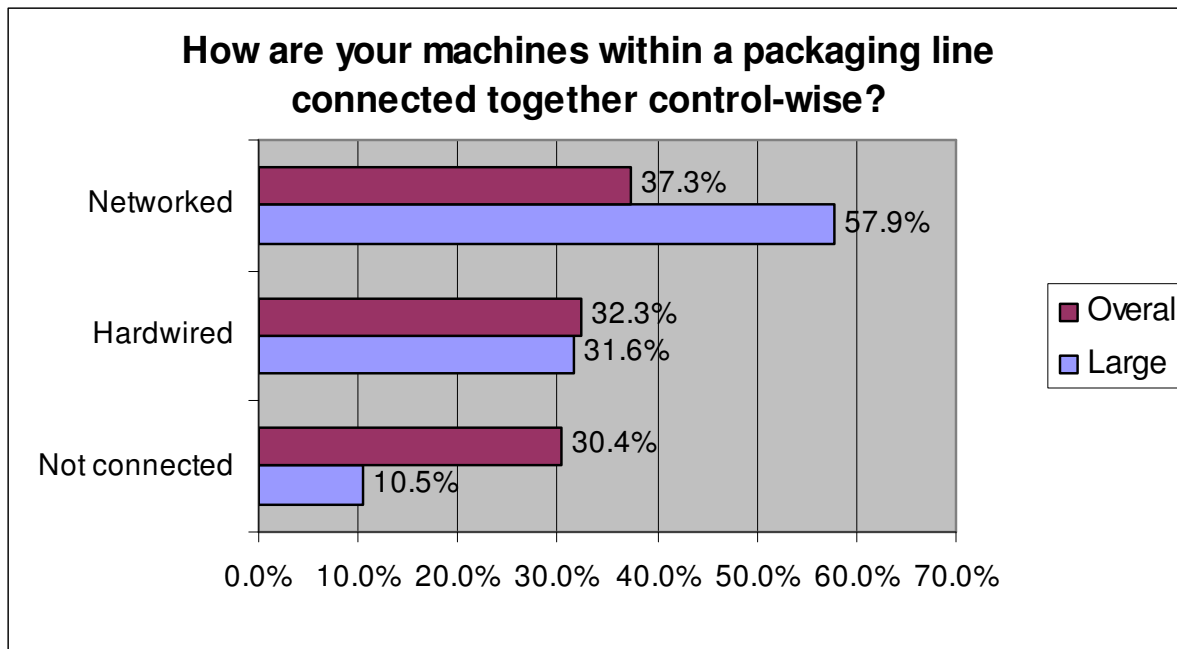
Yes 63.9%
No 36.1%



- More than one control provider
- Buyers are trying to minimize the number of control providers



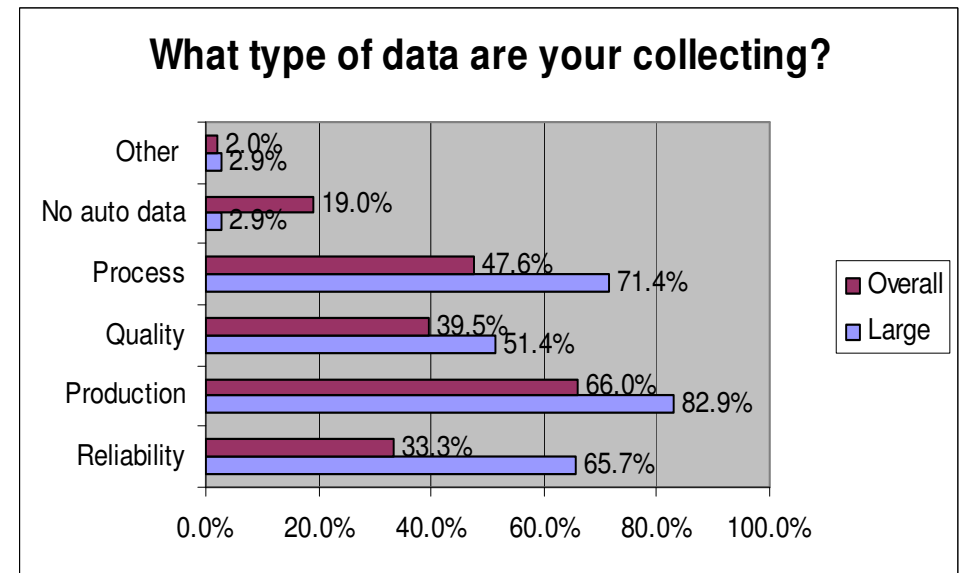
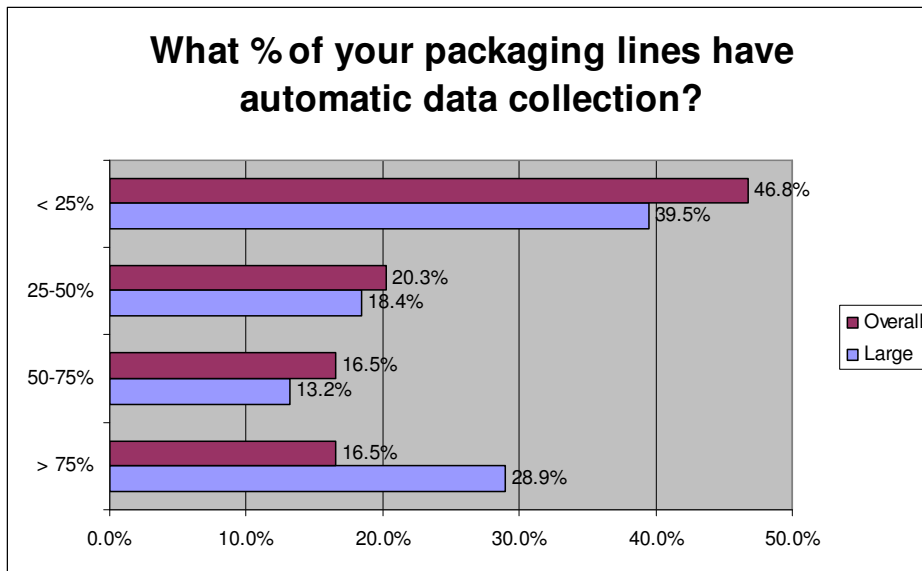
Buyer Packaging Line Connections



- Over 60% packaging lines not networked!
- Large companies have much large % lines networked
- % networked has doubled since Packaging World survey in 2002
- “Interoperability of dissimilar platforms”



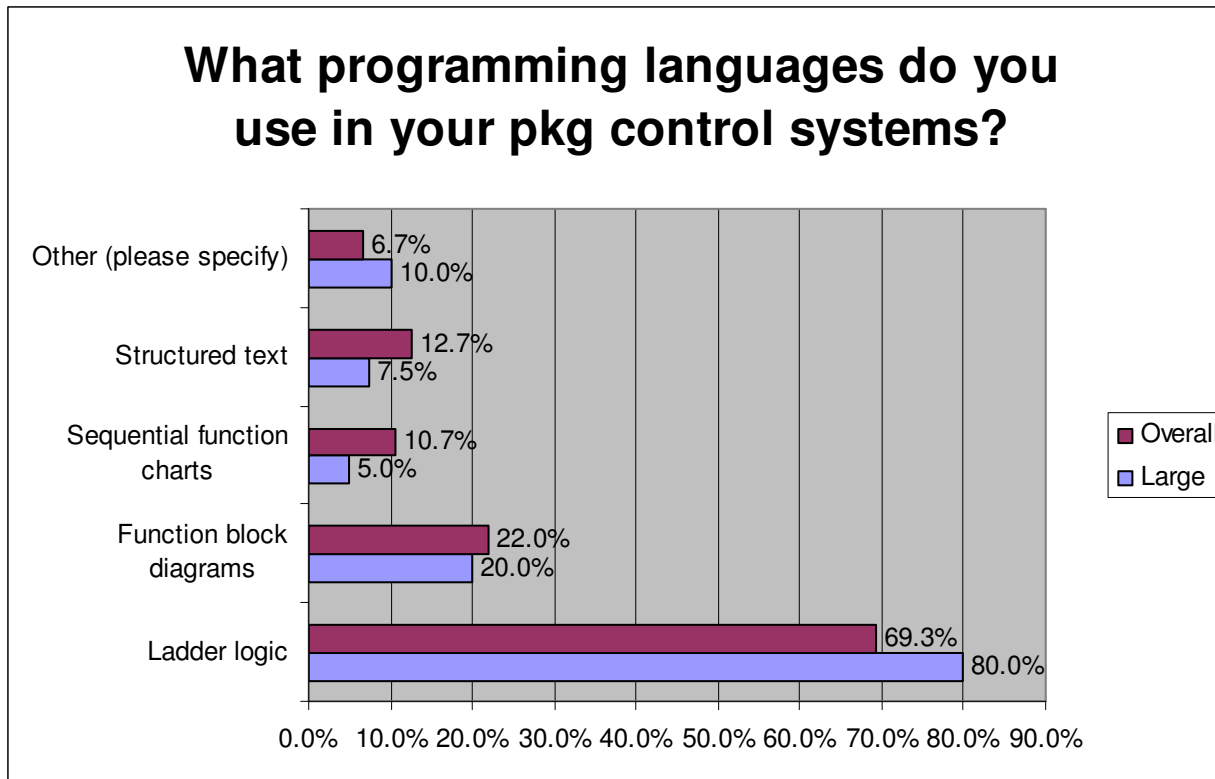
Data Collection



- Many packaging lines have no data collection
- Large companies do more data collection
- Big lost opportunity – reliability data collection
- “Having everyone buy into the benefits of automation controls and the potential wealth of information that can be gained thru improved controls”



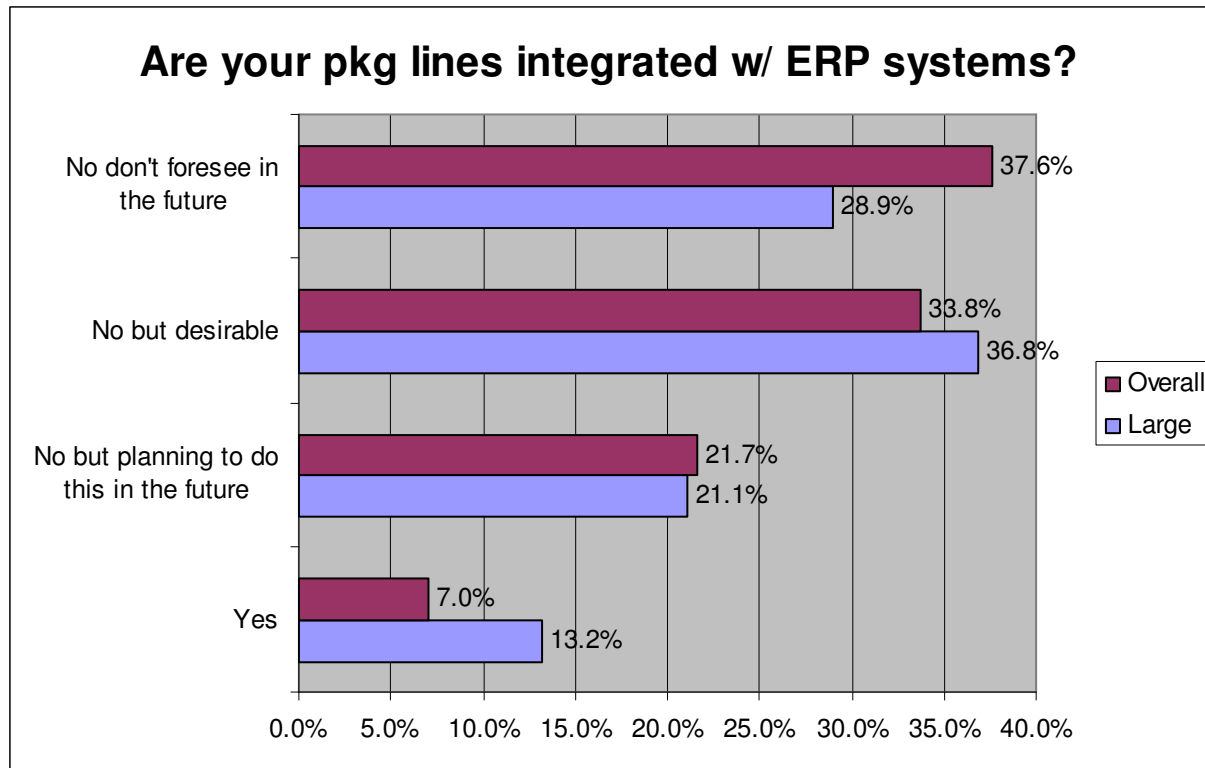
Buyer Programming Languages



Benefits of other programming languages (besides ladder) are not being leveraged on most packaging lines



ERP Integration



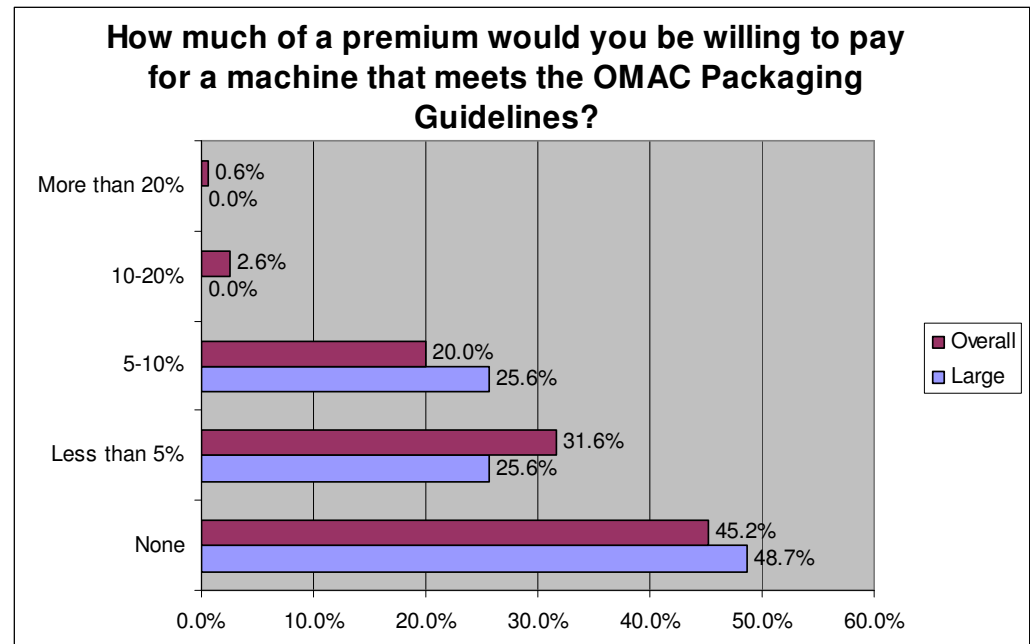
- Most see the benefit but few doing ERP Integration now
- Large companies doing more ERP integration



Buyer OMAC Packaging Guidelines

Do you specify any of the OMAC Packaging Guidelines on your packaging machines?

	Overall	Large
Yes	20.1%	25.6%
No	79.9%	74.4%



- OMAC Packaging Guidelines become more important as packaging lines:
 - Are networked together
 - have information systems
 - are tied to ERP systems
- Need to get the word out on the OMAC Packaging Guidelines and the benefits
- Over 50% willing to pay a small premium for OPW Guidelines



Buyer

Desired Capabilities

Ability for maintenance technicians to maintain and diagnose controls systems regardless of system vendor	2.46
Ability to access machine diagnostic data	2.37
Ability to access product performance data	2.29
Ability to have a consistent software structure in all packaging machines regardless of the OEM	2.27
Ability to connect all sensors actuators and controllers within a packaging machine by using an industry-standard network	2.20
Having a standard and consistent machine state operating model regardless of machinery OEM	2.19
Ability to connect multiple vendors' drives to a single controller on an industry-standard network	2.04
The development of nationally recognized qualifications for technical staff involved in packaging machinery automation	1.88
Ability to create applications from a library of reusable software modules	1.85
Ability to leverage the benefits inherent in IEC 61131-3	1.60

Diagnostics & support is a top priority



Comparison of Desired Capabilities

	Supplier Rank	Buyer Rank
Ability for maintenance technicians to maintain and diagnose controls systems regardless of system vendor	1	1
Ability to access machine diagnostic data	2	2
Ability to have a consistent software structure in all packaging machines regardless of the OEM	3	4
Ability to connect all sensors actuators and controllers within a packaging machine by using an industry-standard network	4	5
Ability to create applications from a library of reusable software modules	5	9
Ability to access product performance data	6	3
Ability to connect multiple vendors' drives to a single controller on an industry-standard network	7	7
Having a standard and consistent machine state operating model regardless of machinery OEM	8	6
The development of nationally recognized qualifications for technical staff involved in packaging machinery automation	9	8
Ability to leverage the benefits inherent in IEC 61131-3	10	10

Survey Highlights

- Buyers & suppliers trying to minimize number of control providers
- Most packaging lines are
 - Not networked
 - Don't have information systems
- Reliability data collection is a big missed opportunity
- Buyers and suppliers are not leveraging the other programming languages (besides ladder)
- Support & diagnostics are a concern for both buyers & suppliers



For More Information

- OMAC Packaging website
(www.omac.org/packaging)
 - Survey results
- OMAC Brochures
- Contact
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Questions???

