Selling into Life Science Research 2020
The eCommerce shift
## Agenda

<table>
<thead>
<tr>
<th></th>
<th>1 Today's Life Science Research Market</th>
<th></th>
<th>2 The eCommerce shift</th>
<th></th>
<th>3 Way forward for Life Science Research suppliers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applied methodology</td>
<td>15</td>
<td>Life Science Research player overview</td>
<td>17</td>
<td>Sources of information</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 List of abbreviations</td>
<td>22</td>
</tr>
</tbody>
</table>
Section 1

*Today’s Life Science Research Market*
Life Science Research is a key segment of the overall Life Science market, 2013 size estimated at 10.7 billion US$

Overall Life Science market size currently at 51.3 bn US$

The global Life Science market was worth 51.3 bn US$ in 2013. It comprises Life Science Research, Molecular Diagnostics, Point-of-Care-Testing, Bioinformatics, Genetic Health, Immunology, and others.

Life Science Research as a segment of the overall Life Science market

The Life Science Research market is one of the key segments of the Life Science market. With total revenues of 10.7 bn US$ in 2013 it accounts for 21% of the total market, with its focus on research related applications.

Main products are specialty biochemicals, research reagents, as well as instruments and systems. The main customers are biotech research institutions, academia, pharmaceutical companies, and independent institutes such as Frauenhofer.

Source: BCC Research (2014), annual reports, company websites, PwC research, PwC analysis

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6 October 2014
Section 1 – Today’s Life Science Research Market

**Slowing growth in APAC is compensated for by returning growth in North America, 4.5% CAGR 2013-20 expected**

**Life Science Research – Market outlook, 2010-20**

- **Share in %**
  - 2010: 42% RoW, 16% APAC, 36% EUR
  - 2013: 39% RoW, 20% APAC, 35% EUR
  - 2020: 37% RoW, 23% APAC, 33% EUR

- **CAGR 10-13**
  - RoW: 6.8%
  - APAC: 12.3%
  - EUR: 3.3%

- **CAGR 13-20**
  - RoW: 5.6%
  - APAC: 6.2%
  - EUR: 3.8%

**Life Science Research market with constant growth around 4.5% CAGR**

The Life Science Research market grew at a rate of 4.4% from 2010 to 2013 per year and is expected to continue to grow with 4.5% CAGR from 2013 to 2020.

**Slowing growth in APAC compensated for by accelerating growth in NA**

APAC is expected to see a significant slowdown in growth from 12.3% per year to a much slower pace of around 6.2% CAGR until 2020. North America is expected to more than double its previous growth to 3.9% CAGR until 2020 and will lead worldwide growth in absolute terms.

**Rest of world with continuous growth**

Rest of world mainly comprises South America, which is a young market with much potential and investment opportunities particularly around eCommerce. Africa has yet to play a significant role in this market.

**Source:** Evaluate Group (2013), Transparency Market Research (2014), annual reports, company websites, PwC research, PwC analysis

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Life Science Research is a fragmented market showing increasing M&A activity in last two years

Life Science Research – Overview of market shares, 2013

- Life Technologies (now part of Thermo Fisher): 15%
- Sigma Aldrich (now acquired by Merck): 13%
- Others: 35%
- Illumina: 12%
- Qiagen: 8%
- Bio-Rad: 7%
- Roche Diagnostics: 6%
- Thermo Fisher: 4%

Source: Roche (2013), annual reports, company websites, PwC research, PwC analysis

Fragmented Life Science Research market so far

Life Science Research is a fragmented market. There are several important key players holding up to 15% of market share. However, concentration is limited and other than key players account for more than 1/3 of the total market.

None of the players is solely active in Life Science Research. Some big players such as Roche Diagnostics have only a small market share relative to their overall size whereas for other, smaller players such as Illumina and Bio-Rad this is one of the key markets.

Increasing consolidation, attractive market for acquisitions

Recent acquisitions in the Life Science Research market, such as Merck’s acquisition of Sigma Aldrich, are further fuelling the ongoing consolidation. With steady growth rates and innovative players entering the market, more acquisitions seem likely.
Section 2

The eCommerce shift
Life Science Research customers have a constant choice between multiple online and offline channels

Life Science Research – Typical customer journeys

Illustrative

Customers currently have to use online as well as offline journeys

Most customers currently cannot follow complete online journeys as they often need to switch between online and offline channels to complete their tasks.

A typical customer journey starts with internet research about products and applications but then requires print media to be accessed or used to deepen this knowledge. Products may well be ordered online or via eProcurement while even small service requests may need onsite assistance.

However, these breaks and gaps will be reduced eventually leading to an increase in pure online customer journeys.

eCommerce includes web shop and eProcurement sales

eCommerce does not stop with the web shop focused on smaller customers. Large customers are connected via customized eProcurement interfaces that have all shop functionalities, but can only be accessed by members of the customer organization.

Source: PwC research, PwC analysis

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Section 2 – The eCommerce shift

**PwC analysis shows Life Science Research market soon to be driven by eCommerce, current share 38.4%**

**Life Science Research – eCommerce shift, 2010-20**

- **Traditional**
  - 2010: 31.4%
  - 2013: 38.4%
  - 2020: 20.0%

- **eCommerce**
  - 2010: 68.6%
  - 2013: 61.6%
  - 2020: 70.0%

Depending on scenario eCommerce share varies between 70-80%

**Estimation**

- CAGR 10-13: 4.4%
- CAGR 13-20: 4.5%

Dramatic shift towards more eCommerce sales

Growth of eCommerce share within Life Science Research sales is likely to increase even faster until 2020. While growth of eCommerce 2010-13 was 11.9% p.a. the PwC eCommerce model shows a likely growth rate of between 14.0% and 15.9% p.a. until 2020.

eCommerce sales share of Life Science Research market is projected to reach a share of 70.0 - 80.0%.

Decreasing traditional sales in share and absolute value until 2020

While 2010-13 showed a steady total amount of traditional Life Science Research sales their share within the market declined from over 68% to under 62%.

Until 2020 traditional shares are expected to decline even further to a share of 20.0-30.0% with a dramatic impact on sales and marketing organizations.

*Source: PwC research, PwC analysis, PwC eCommerce model*
Both internal and external factors drive the eCommerce share for Life Science Research players

Life Science Research – Key drivers of eCommerce

1. **eCommerce significance**
   LSR players increase focus on developing own eCommerce capabilities

2. **Talent attraction**
   LSR players will grow their eCommerce and digital native talent base

3. **Investment capabilities**
   LSR players invest in eCommerce through shifting internal budgets

4. **Usage of digital channels**
   Customer usage of digital channels increases globally

5. **Personalized shopping experience**
   Customers also expect “B2C-like” shopping experience in B2B

6. **New market entrants**
   New pure players such as AmazonSupply enter the LSR distribution market

Modelling the future share of eCommerce in the LSR market

Internal drivers in our model can be influenced by LSR players directly through adapting their strategy and organization, digitizing processes, or attracting new people & skills. External drivers tend to be driven by changes in customer behavior, advances in technology or changes in the competitive environment. In total we identified 18 drivers – only the six most important ones are highlighted here.

Customers and investment capabilities are very LSR specific

LSR customers tend to be highly educated, content driven and easily adopt new technology – all accelerating digitization. Some of the investment capabilities come from shifting the traditionally high LSR SG&A costs (typically >30% of revenue) to digital channels. In addition, LSR players are in a strong position with financial markets for support with growth opportunities.

Source: PwC research, PwC analysis, PwC eCommerce model

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2020 go to market model shows increasing eCommerce sales and emerging eCommerce market places

Life Science Research – Go to market approach 2020

Life Science Research market places as new market players

B2B markets in general but the Life Science Research market in particular are interesting targets for market places with experience in B2C. Those market places will aim to become a one-stop-shop solution and try to gain market share from suppliers and especially distributors.

Increasing share of eCommerce sales for all players

While market places are selling their goods only via eCommerce, the eCommerce share of all players will increase as a result. Customers will demand more and more eCommerce features by comparing offers and those players who match these best are likely to increase their market share. The impact on market shares as well as margin levels can only be estimated from other industries which experienced similar scenarios.

Source: Annual reports, company websites, PwC research, PwC analysis

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Section 2 – The eCommerce shift

Due to fast shift towards eCommerce, three end customer channel-mix scenarios are conceivable

Life Science Research – Channel-mix scenarios 2020

Three scenarios of end customer channel-mix conceivable

Depending on their willingness to invest and quality of market strategy, suppliers have the opportunity to gain significant market share from distributors. Never before has it been more cost-efficient for suppliers to reach end users directly.

Of course the reverse of this scenario may happen if suppliers fail to invest in online end user reach and distributors expand their lock-in effects to eCommerce.

Market place to gain share in each case – faster gain when acting fast

Market places will gain certain share of the Life Science Research market in any case – quite possibly by focusing on smaller, more independent customers first. However, if both suppliers and distributors fall behind in their eCommerce capabilities, there may be a window of opportunity for market places to capture an even larger share.

Source: PwC research, PwC analysis

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Section 3
Way forward for Life Science Research suppliers
eCommerce readiness of suppliers varies, but overall shows need for significant optimization

<table>
<thead>
<tr>
<th>Life Science Research – Supplier eCommerce readiness, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier A</td>
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<tr>
<td>% eCommerce revenues</td>
</tr>
<tr>
<td>eCommerce availability</td>
</tr>
<tr>
<td>Digital user experience</td>
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<tr>
<td>Social Media activities</td>
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Varying supplier eCommerce share

While some supplier already have an eCommerce share of up to 62%, others significantly lag behind with shares below 30%. The market average of approx. 38.4% shows that these players already have a lot to catch up – even by today’s standards. The relatively high share of 62% for others indicates that some players have already entered on a significant eCommerce growth path.

Support activities with a lot of remaining potential

As suppliers enter eCommerce, they consequently need to adapt their traditional marketing measures to digital ones.

Not one player has user experience or social media activities comparable to today’s B2C standards.

Thus, increasing the share of products offered via eCommerce channels requires investment in online marketing measures and user experience optimization as well.

Source: Compete, company websites, PwC research, PwC analysis
Surviving the eCommerce shift – selected approaches for developing supplier 2020 eCommerce strategies

Life Science Research – Selected supplier 2020 eCommerce strategies

1. **Strategic supplier partnerships with joint eCommerce platform**
   - **Main benefits:** Creating synergies, scaling joint customer access, sharing talent, harmonizing proven approaches, reducing setup costs, etc.
   - **Key challenges:** Creating the right product offering, aligning objectives, preventing brand dilution, etc.

2. **Complete third party portfolio on own eCommerce platform**
   - **Main benefits:** Leveraging existing brand name & market access, reducing payback time for eCommerce activities, justifying investment, etc.
   - **Key challenges:** Creating complete product offering, avoiding cannibalization of own products, etc.

3. **Founding independent eCommerce marketplace under new brand**
   - **Main benefits:** Ensuring independent & agile decision making, starting in a greenfield environment, allowing experimenting, etc.
   - **Key challenges:** Ensuring initial funding, developing governance model, establishing trust between both organizations, etc.

Balancing agile disruption with smooth transition

Developing eCommerce strategies for suppliers is a challenging task requiring meticulous tailoring to the specific situation. However, PwC sees three promising broad directions for LSR suppliers outlined on the left hand side.

All three options carry a substantial disruptive element which we believe is required to counter the fast changing sales and marketing environment over the next few years. In addition, these options will maximize both talent attraction and investment capabilities.

One of the key challenges will be to set a sufficiently aggressive pace for building up the required eCommerce capabilities while ensuring a smooth transition of both customers as well as sales and marketing organizations.
### PwC supports Life Science Research suppliers in developing successful 2020 eCommerce strategies

#### eCommerce readiness assessment
- Current eCommerce setup assessment with focus on:
  - Strategy
  - Processes
  - Organization
  - People and skills
  - Technology
  - Culture and change readiness
- Sales channel management analysis to assess eCommerce importance
- External industry and cross-industry benchmarking incl.
  - Digital marketing performance
  - Online shop performance
  - Etc.
- Gap analysis and portfolio of short- and mid-term initiatives

#### eCommerce growth strategy development
- Complete or focused eCommerce readiness assessment
- Strategic eCommerce option development incl.
  - Online sales channel strategies
  - M&A opportunities
  - Outsourcing opportunities
  - Etc.
- Online pricing strategy
- Option alignment with overall sales, marketing and pricing strategy
- Tax and legal implications assessment for eCommerce options
- Strategic roadmap and implementation plan development

#### eCommerce organization design & change management
- Target eCommerce organization definition
  - Processes
  - Roles and responsibilities
  - Job profiles
  - Structure
  - Culture
- Governance structure and boundaries definition for eCommerce
- Detailed gap analysis on all organizational aspects
- Talent acquisition strategy definition
- Change impact analysis and transition plan development

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**Source:** PwC

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Appendix 1

Applied methodology
Proven PwC methodology was applied to create this market study

Life Science Research – Methodology overview

1. Collection of information in the public domain (company reports, industry studies, etc.)
2. Data analysis of LSR player eCommerce information (site visits, social media data, etc.)
3. PwC model of current LSR eCommerce share
4. Industry and topic expert opinions on LSR future eCommerce development
5. PwC model of future eCommerce share

LSR market and eCommerce information

Information on the LSR market was used to define market boundaries and current market distribution. Figures available in the public domain for selected eCommerce shares were used together with site traffic data analysis to derive eCommerce shares for all LSR players. eCommerce availability and digital user experience were analyzed based on information from LSR player websites. Social media activities were directly assessed from Facebook, Twitter, YouTube, etc. accounts of LSR players.

Industry and topic expert opinion

Our analysis was supported by interviews with and input from several experts. Experts came from industry focus with deep knowledge from project experience with leading LSR players. In addition, the opinion of experts with background from B2B sales and eCommerce was taken into account.

Source: PwC research, PwC analysis, PwC eCommerce model

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Appendix 2

Life Science Research player overview
### Overview of market players in 2013 (1/2)

*Sorted by size*

<table>
<thead>
<tr>
<th>Company</th>
<th>Founded</th>
<th>Headquarter</th>
<th>Revenue</th>
<th>No. employees</th>
<th>Business areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life Technologies</strong></td>
<td>1962</td>
<td>Carlsbad (US)</td>
<td>Approx. 3.9 bn US$ (approx. 42% LSR)</td>
<td>Approx. 110,400</td>
<td>Research consumables, genetic analysis</td>
</tr>
<tr>
<td><strong>Roche Diagnostics</strong></td>
<td>1984</td>
<td>Rotkreuz (CH)</td>
<td>Approx. 11.3 bn US$ (approx. 7% LSR)</td>
<td>Approx. 25,000</td>
<td>Prof. diagnostics, diabetes care, molecular diagnostics, tissue diag.</td>
</tr>
<tr>
<td><strong>Qiagen</strong></td>
<td>1984</td>
<td>Venlo (NL)</td>
<td>Approx. 1.3 bn US$ (approx. 50% LSR)</td>
<td>Approx. 4,000</td>
<td>Molecular diagnostics, academia, pharma, applied testing</td>
</tr>
<tr>
<td><strong>Illumina</strong></td>
<td>1998</td>
<td>San Diego (US)</td>
<td>Approx. 1.4 bn US$ (approx. 90% LSR)</td>
<td>Approx. 3,100</td>
<td>Life sciences, diagnostics</td>
</tr>
<tr>
<td><strong>Sigma Aldrich</strong></td>
<td>1975</td>
<td>St. Louis (US)</td>
<td>Approx. 2.7 bn US$ (approx. 52% LSR)</td>
<td>Approx. 9,000</td>
<td>Research, applied, SAFC</td>
</tr>
<tr>
<td><strong>Thermo Fisher</strong></td>
<td>1902</td>
<td>Waltham (US)</td>
<td>Approx. 13.0 bn US$ (approx. 3% LSR)</td>
<td>Approx. 50,000</td>
<td>Laboratory products and services, specialty diag., analytical instruments</td>
</tr>
</tbody>
</table>

*Source: Annual reports, company websites, PwC research, PwC analysis*
## Overview of market players in 2013 (2/2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Founded</th>
<th>Headquarter</th>
<th>Revenue</th>
<th>No. employees</th>
<th>Business areas</th>
</tr>
</thead>
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<tr>
<td><strong>Bio-Rad</strong></td>
<td>1952</td>
<td>Hercules (US)</td>
<td>Approx. 2.1 bn US$</td>
<td>Approx. 7,750</td>
<td>Clinical diagnostics, life sciences</td>
</tr>
<tr>
<td><strong>Merck Millipore</strong></td>
<td>1954</td>
<td>Billerica (U.S.)</td>
<td>Approx. 2.6 bn US$</td>
<td>Approx. 10,000</td>
<td>Lab solutions, process solutions, bioscience</td>
</tr>
<tr>
<td><strong>BioMérieux</strong></td>
<td>1936</td>
<td>Marcy l'Etoile (FR)</td>
<td>Approx. 1.6 bn $</td>
<td>Approx. 8,000</td>
<td>Clinical diagnostics, industrial microbiology</td>
</tr>
<tr>
<td><strong>GE Healthcare</strong></td>
<td>2004</td>
<td>Little Chalfont (U.K.)</td>
<td>Approx. 18.3 bn US$</td>
<td>Approx. 46,000</td>
<td>Surgery, systems, life sciences, medical diagnostics, IT</td>
</tr>
<tr>
<td><strong>PerkinElmer</strong></td>
<td>1947</td>
<td>Waltham (U.S.)</td>
<td>Approx. 2.2 bn US$</td>
<td>Approx. 7,600</td>
<td>Human health (diagnostics, research), environmental health</td>
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<tr>
<td><strong>Miltenyi Biotec</strong></td>
<td>1989</td>
<td>Bergisch Gladbach (GER)</td>
<td>Approx. 0.2 bn US$</td>
<td>Approx. 1.350</td>
<td>Cellular therapy, biomedical research</td>
</tr>
</tbody>
</table>

*Sorted by size

**Source:** Annual reports, company websites, PwC research, PwC analysis

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19
Appendix 3

Sources of information
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<table>
<thead>
<tr>
<th>Source</th>
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<th>Year</th>
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<tr>
<td>Annual reports</td>
<td>Various market player annual reports</td>
<td>2010-13</td>
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<tr>
<td>BCC Research</td>
<td>Life Science tools and reagents: Global markets</td>
<td>2014</td>
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<td>Company websites</td>
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<td>Compete</td>
<td>Online website traffic analysis tool</td>
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<td>Roche</td>
<td>Diagnostics business overview 2013</td>
<td>2013</td>
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<tr>
<td>Transparency Market Research</td>
<td>Life Science reagents market:</td>
<td>2014</td>
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Appendix 4

List of abbreviations
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APAC  Asia Pacific
B2B  Business to Business
B2C  Business to Consumer
CAGR  Compound Annual Growth Rate
EUR  Europe
LSR  Life Science Research
NA  North America
PwC  PricewaterhouseCoopers AG Wirtschaftsprüfungsgesellschaft
RoW  Rest of World
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