

Rotary Flexography

Gravure's Friend...

or Foe?

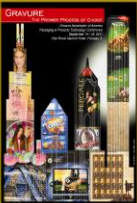


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Throughout the 1950's and early 1960's Flexography was thought of as a crude and inexpensive print process. Flexo plates were often cut by hand, and anilox rolls were mechanically engraved (similar to Gravure) and then chrome plated.



Flexo in the 1970's & 1980's took a low quality process, and through supplier partnerships, created a modern print process that continues to capture market share in every global region.



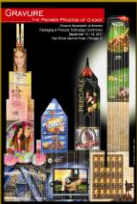
Photopolymer plates were introduced in the early 1970's. In the 1980's lasers were starting to be used to engrave ceramic coated anilox rolls. By 1998 nearly all graphics used in Flexo were computer generated, and laser imaged directly onto the plate-making negative



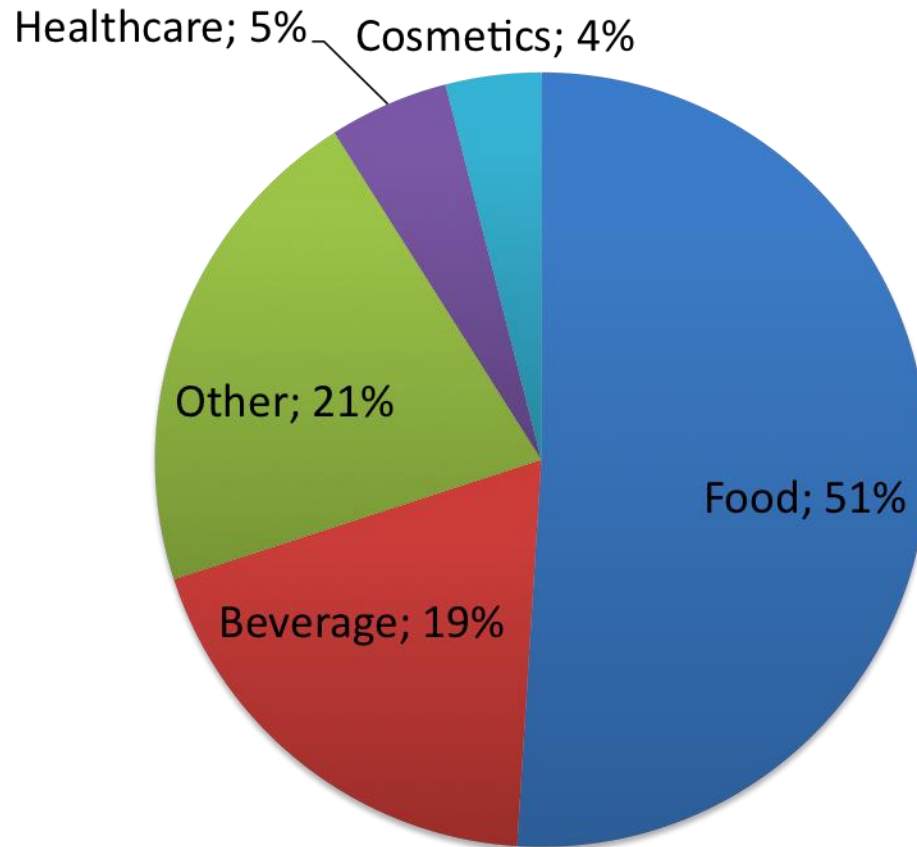
Within the past decade Flexo has additionally witnessed the introduction of closed cell cushion mounting tapes, micro-cell anilox rolls, seamless (DLE) engraved (ITR) printing plates, and digitally controlled servo drives that produce highly accurate image register control.



Recent estimates indicate that approximately 55-60% of the world's \$440 Billion printed packaging is printed flexographically; with annual growth rates estimated at 4-5%



Global Consumer Packaging by Major End-Use Category

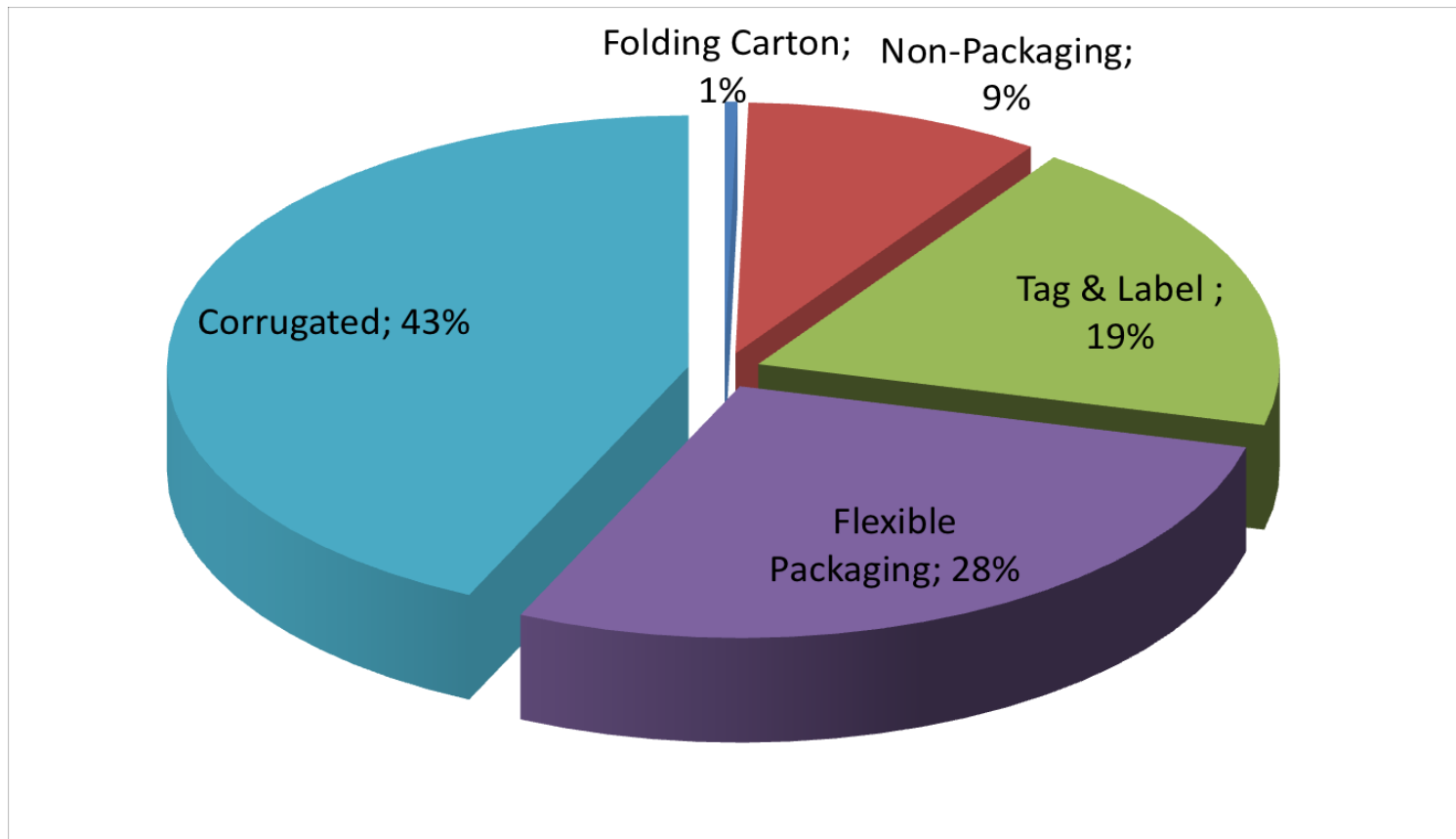


Source: Rexam Market Profiles 2008

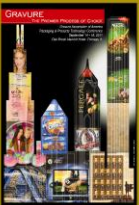


Global Flexo Market 2009

Share by Sector



Source: LPC, Inc.



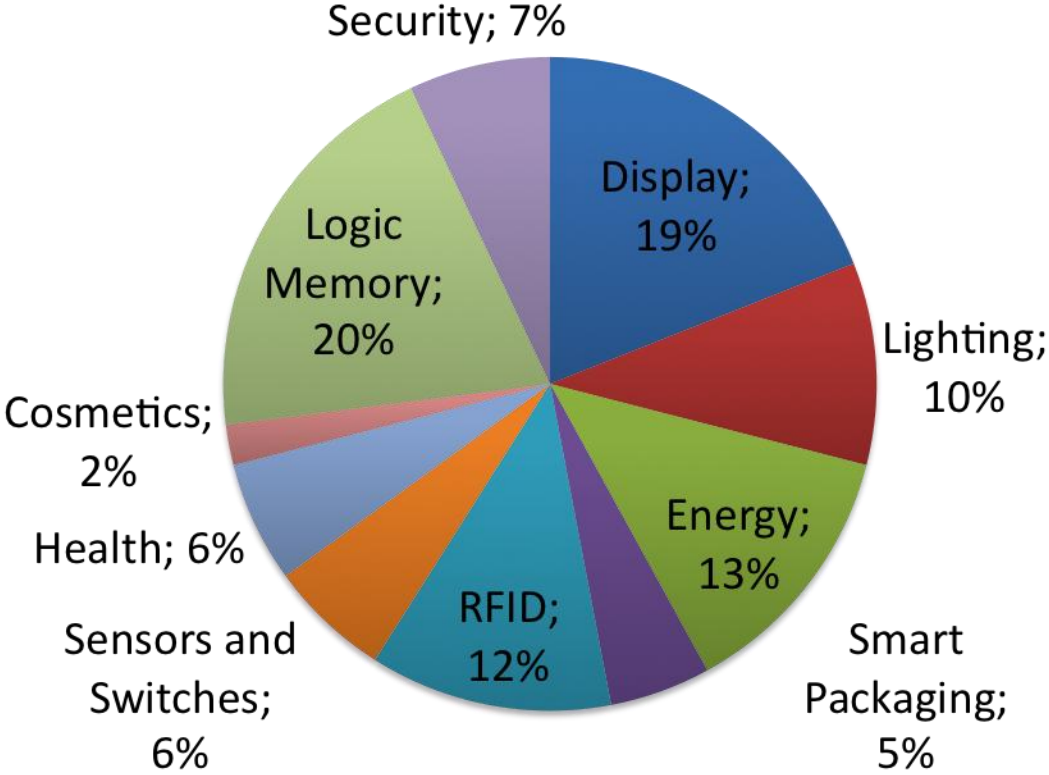
Global Flexo Press Installations (in use) 2009

Region	Corrugated	Flex/Pkg.	Folding Crtn.	Tag & Label	Other
N. America	4,770	3,710	530	8,310	180
W. Europe	3,730	2,960	240	5,920	130
E. Europe	1,070	890	60	1,920	35
Middle East	590	480	20	1,080	20
Africa	410	320	45	700	15
Latin America	875	680	90	1,520	30
Asia	2,020	630	80	2,480	45
Australasia	220	170	25	380	8

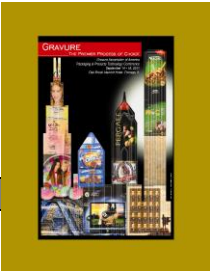
Source: LPC, Inc. 2009



Printed Electronics Market Forecast 2020 = \$89 Billion



Source: Mark Andy, Inc.



A recent study polled 70 print buyers; almost all of them only purchase packaging. Nearly 40% stated that Flexo will replace “some” of their Gravure printed materials.



Source: PRIMIR “Benchmarking and Worldwide Market Trends for Flexographic Printing”

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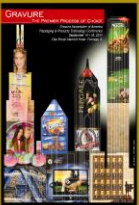
Friend or Foe?

While it is unlikely we will see in our lifetime the millions and millions of Gravure printed cigarette labels & boxes, IML detergent labels, or french fry containers - sometimes produced in one shift - replaced by Flexography; however, it is likely, and substantiated that Flexo is continuing to command respect (and market share) of the flexible packaging sector!



What is likely?

More and more major packaging converting companies will invest in Flexo technology; but not necessarily divest their core competency. Having this increasingly improving technology in their process model will offer low-cost solutions to the engineering phase of brand development. This is especially true when a consumer packaged goods company is competing for marketing capital, and might otherwise decide NOT to launch a “new brand” due to the market risks associated with Gravure start-up costs.



Thank You!



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