

# 3D Maryland Image + future of Maryland manufacturing

Feb 7, 2013 Miller Senate Office Building



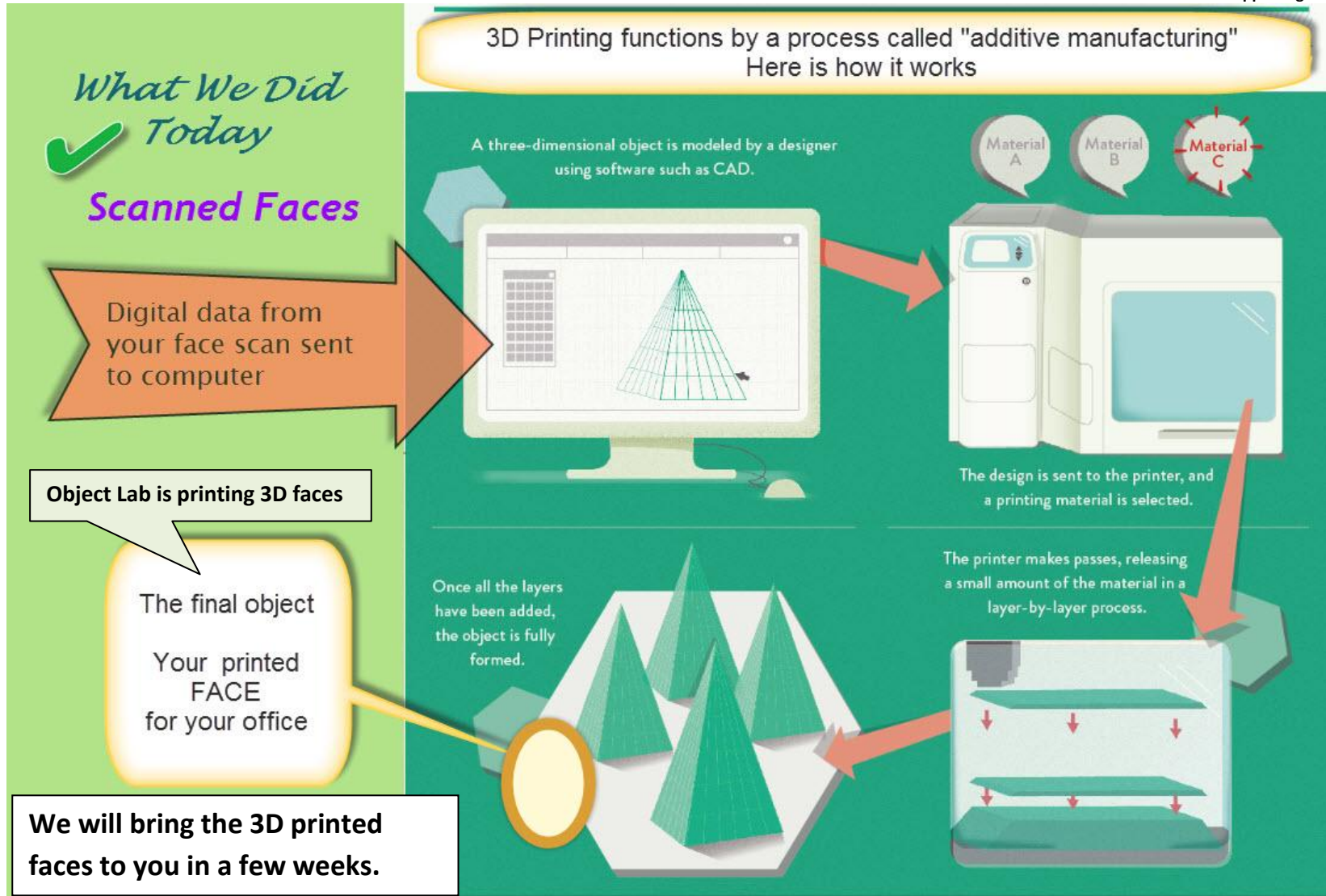
Thank you Senator Klausmeier for supporting us.



**DIRECT DIMENSIONS**  
RAPID SOLUTIONS TO 3D PROBLEMS

## Maryland Advisory Commission on Manufacturing Competitiveness

### Scanning + printing the faces of Maryland legislators



Some of these machines, such as those made by Objet, can print in over 100 materials. These materials can create:



Rubber materials

Hard plastics

Polyurethane-like materials

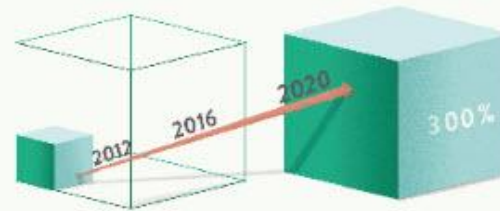
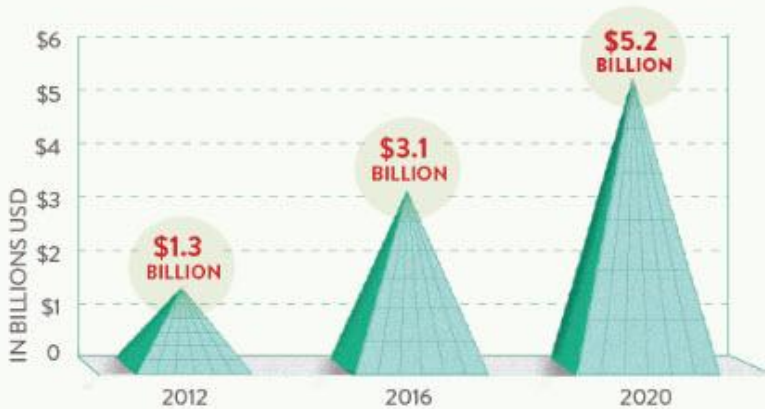
Temperature-resistant materials

Opaque and transparent materials

This is a wholly different process from traditional “subtractive manufacturing,” where material is machined away to form an object.

### THE GROWTH OF THE 3D PRINTING INDUSTRY

The 3D printing industry is expected to change nearly every industry it touches, completely disrupting the traditional manufacturing process. As a result, the projected value of the industry is expected to explode in the near future, reaching:



This represents a 300 percent growth in just eight short years.

### MORE INFORMATION

#### Allow 2-3 weeks for delivery

Regional Manufacturing Institute of Maryland, Mike Galiazzo - 410-771-8111

Objet, Lab Jan Baum - 443-470-9503

Direct Dimensions, Michael Raphael - 410-998-0887

#### Examples of Maryland organizations + industries using 3D digital technologies

Fab Lab - CCBC

Danko Arlington

Northrop Grumman

Under Armour

Applied Physics Lab - JHU

AAI Corporation

Army Research Lab - Edgewood

Black & Decker

Prime Manufacturing Technologies

Harbor Manufacturing

Digital Fabrication Studio - MICA

Key Technologies

Medical, Construction, Forensics,

Military, Manufacturing, + more



### What do you have in common with Ray Lewis?

A 3D additive manufactured face, made layer by layer, on a 3D printer.



Ray Lewis scanned and printed by Direct Dimensions