

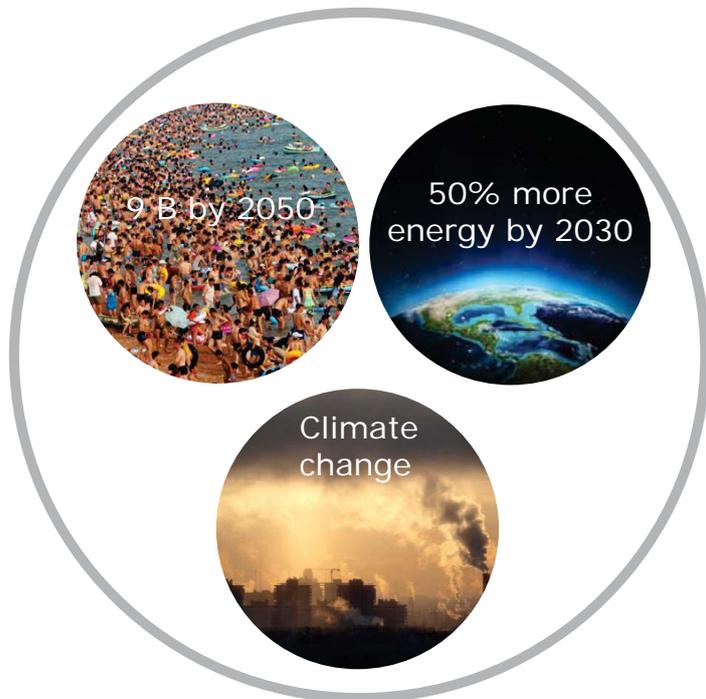
Ressourcen-Revolution: «Natürliches Licht
statt teuer Chemie» **Blue is the NEW Green**

ebeam

15.9.2015 | 1

The greatest challenge of our generation
There are ever more of us. We all want prosperity, but resources are limited. Technological innovation is our way forward.

The dilemma of our time



Solutions



Time for new Concepts



Action Follows Money



PULL

PUSH



Tetra Pak – Our Innovation Partner

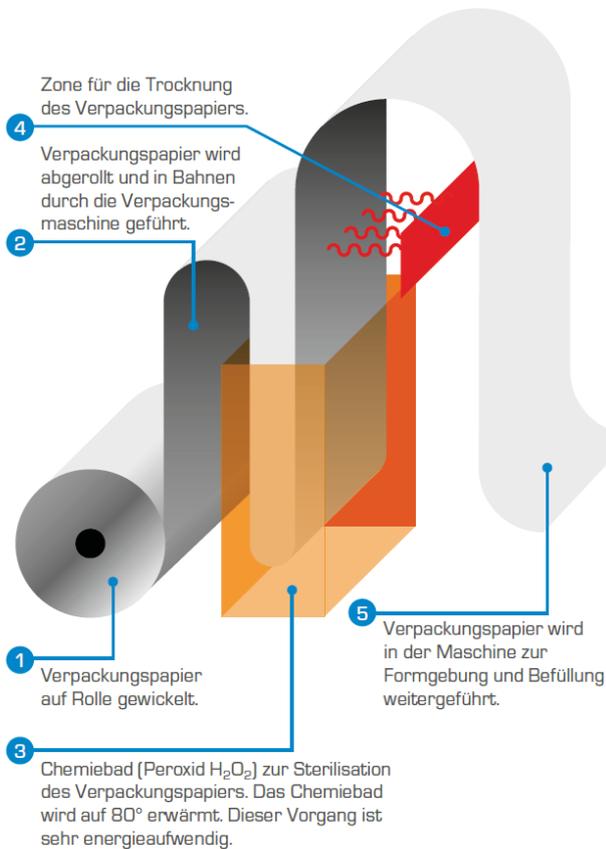
World leader in dring package solutions

2013 sales revenue [M€]	11,075
Number of employees in 2013	23,540
Number of machines in 2013	8,825
Machines delivered in 2013	580
Packs filled in 2013 [billions]	178

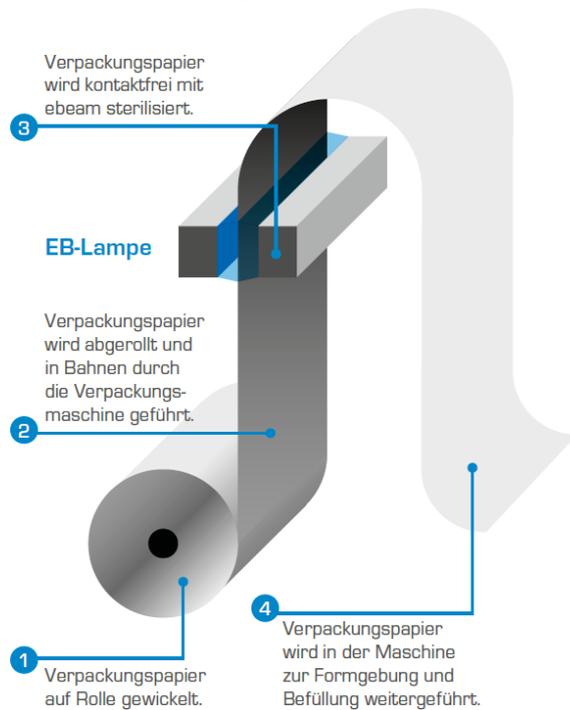


Tetra Pak Application - Chemical-free sterilization

Der bisherige, chemische Prozess.

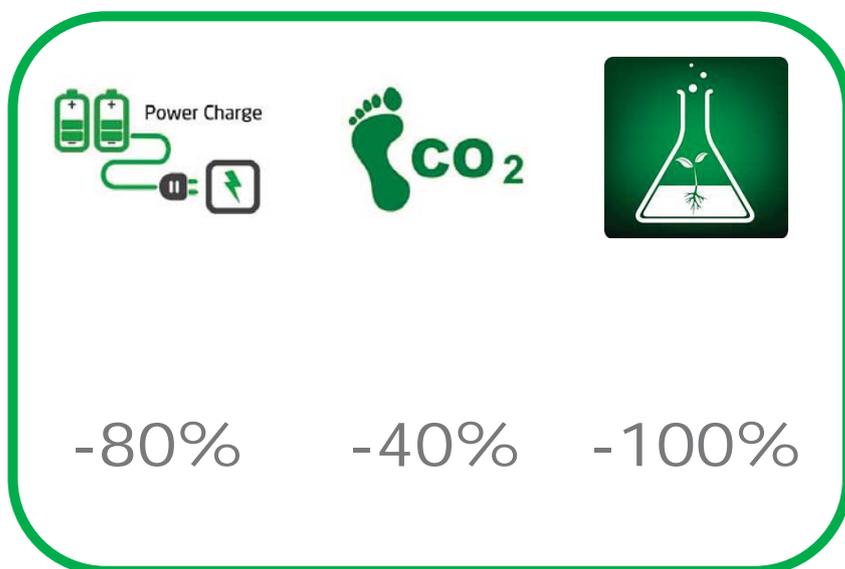


Der zukünftige Prozess mit ebeam.

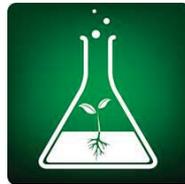


Gemäss der Planung von Tetra Pak werden in Zukunft hauptsächlich ebeam-Maschinen im Einsatz stehen. Der bisherige Herstellungsprozess mit dem Einsatz von Chemie wird weltweit durch die ebeam-Technologie abgelöst. Dadurch leistet Tetra Pak einen wesentlichen Beitrag für eine umweltfreundliche und sichere Verpackung von flüssigen Lebensmitteln.

It`s Green Technology but this is NOT enough



Blue is the new Green – Blue creates Market Pull



-80%

-40%

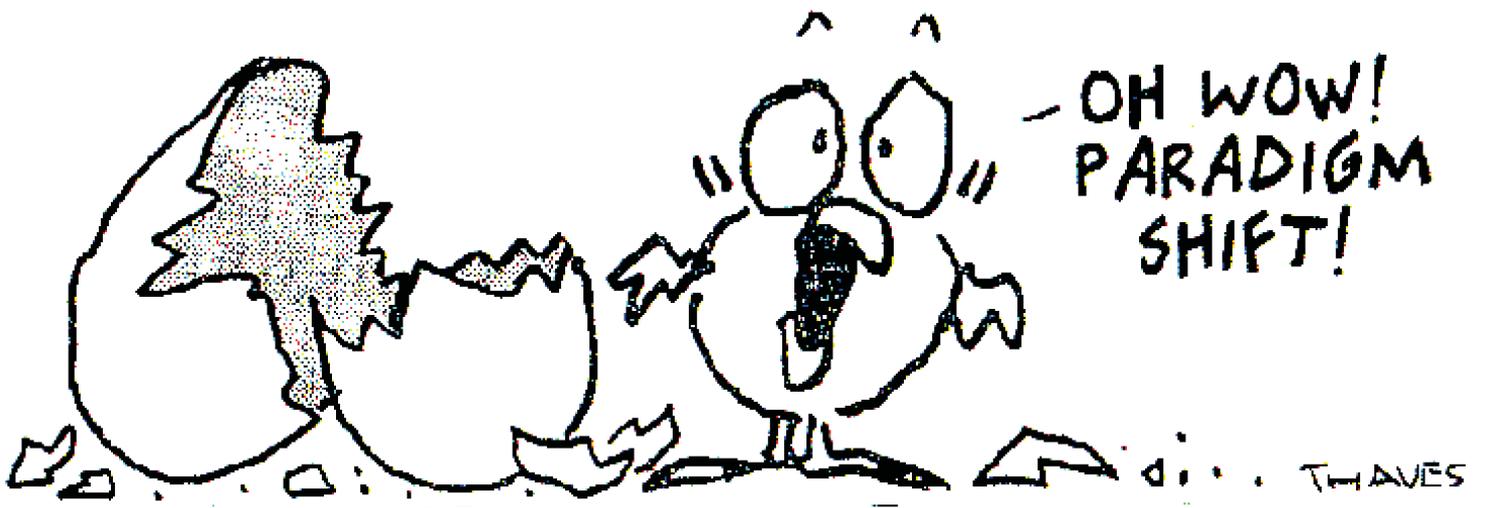
-100%

+165%

-30%



10` 000 Filling Machines per
Year in Operation



COMET at a Glance

Business is based on 3 Technologies (RF, X-ray & ebeam)

Leading global provider of high-quality systems, components and services in industrial x-ray, radio frequency and ebeam technologies.

- 14 subsidiaries worldwide
- CHF 288m sales (2014)
- 99% of sales from outside Switzerland
- SIX SWISS Exchange



> 1050
employees

Headquarters in Flamatt (CH)

COMET

1948
foundation

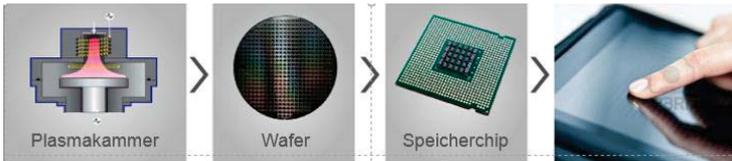
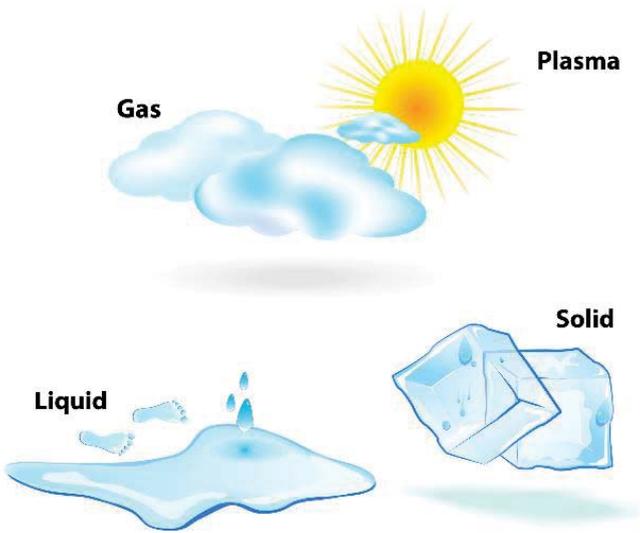
ebeam

RF-Technology-COMET ermöglicht dünnste Schichten



ebeam

COMET Matchbox triggert und steuert das Plasma



COMET Matchbox

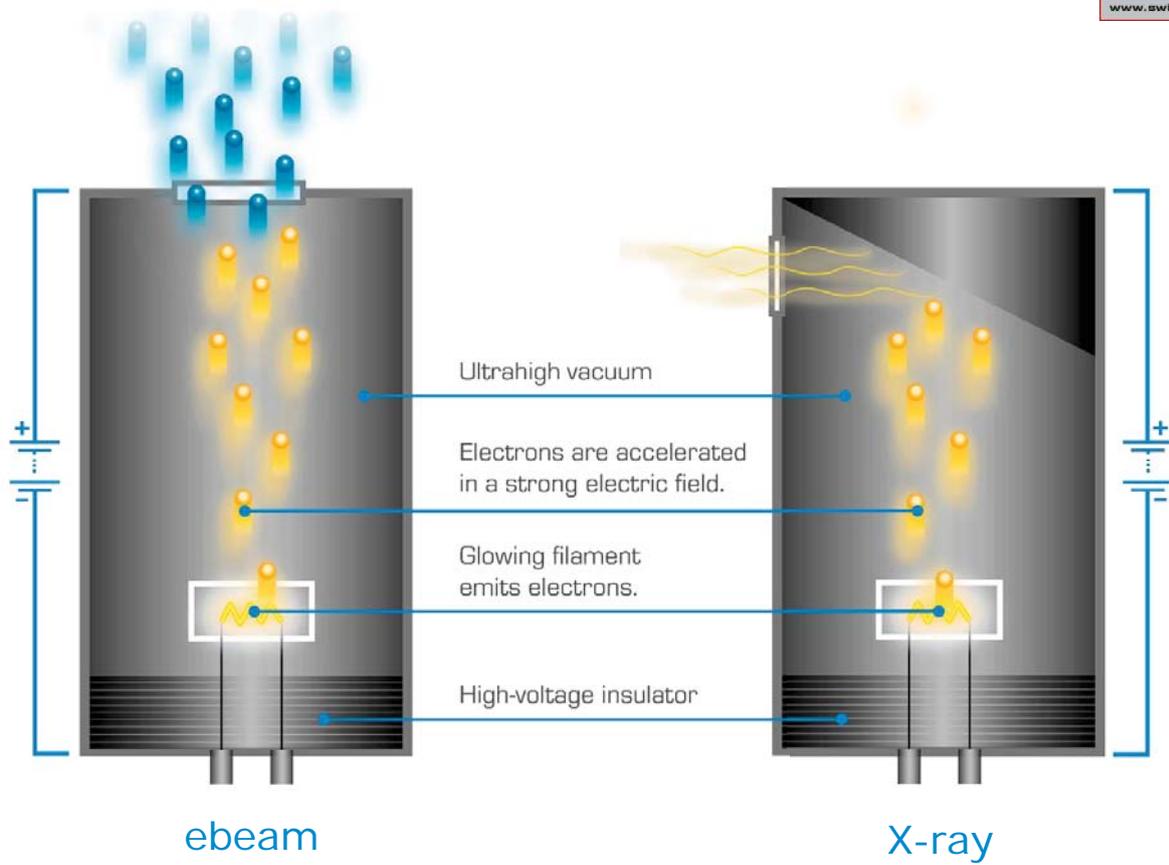
X-ray Technology-COMET macht die Welt ein Stück sicherer



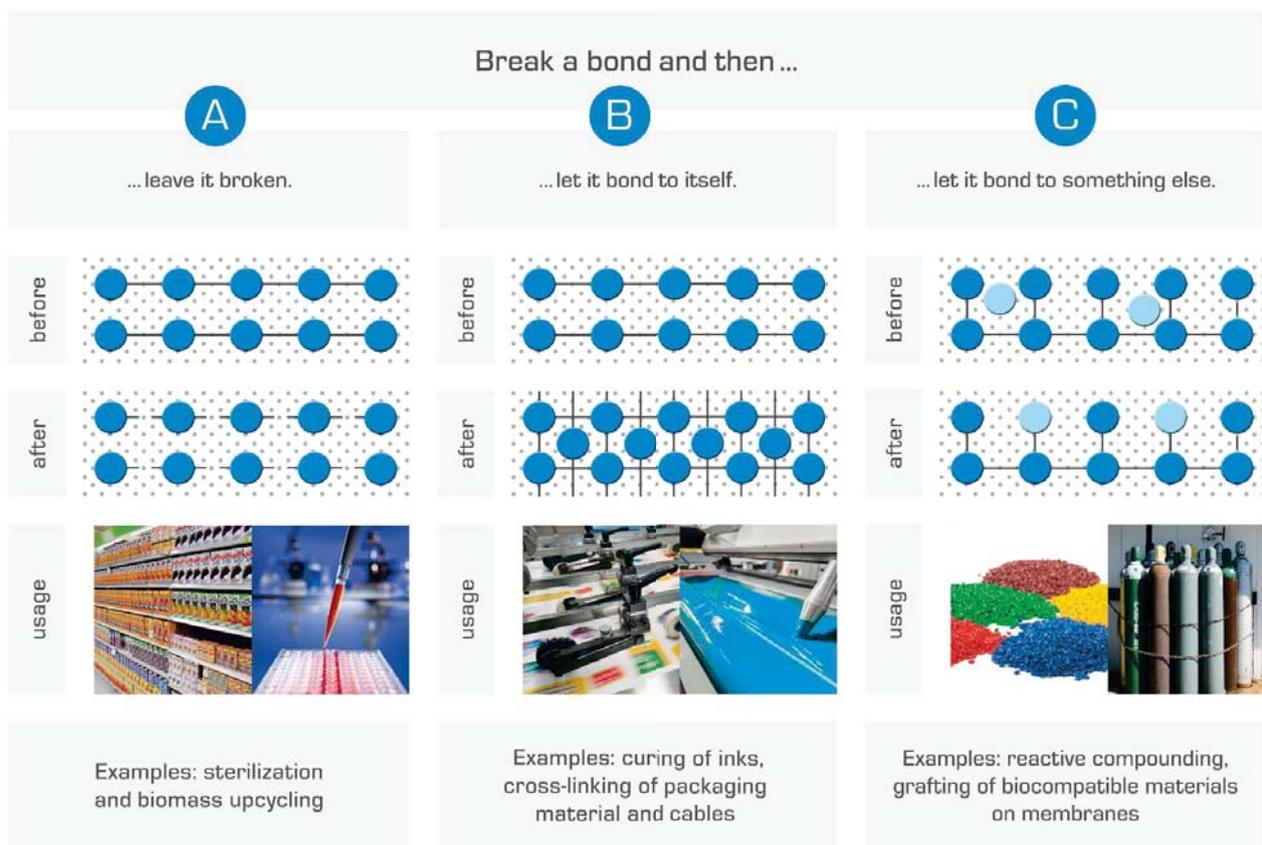
COMET Röntgenquellen liefern zuverlässige Informationen



Working Principle



3 fundamental Effects



Benefits for customers AND the planet



Energize

ebeam reduces energy consumption in certain industrial processes by 50-80%.



Detox

ebeam replaces toxic chemicals in industrial processes.



Feed

ebeam increases the world`s food supply by extending its shelf life.



Synthesize

ebeam increases the world`s food supply by extending its shelf life.

Big Bang at Anuga Food Tec & Fispal

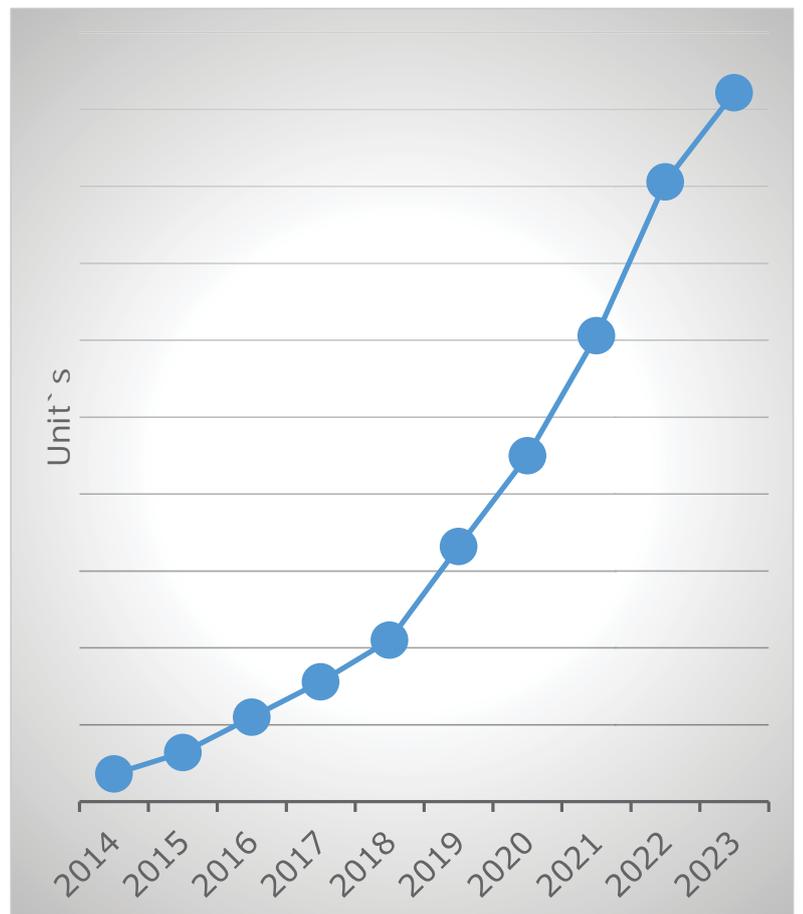


Tetra Pak approach for the rollout

- ebeam will be the standard
- ebeam will be implemented in the main product platform first

- 1 Controlled rollout
- 2 Implementation A3 Speed (2cl – 2l)
- 3 Implementation C3 Flex and others

ebeam



How do we get best out of ebeam?

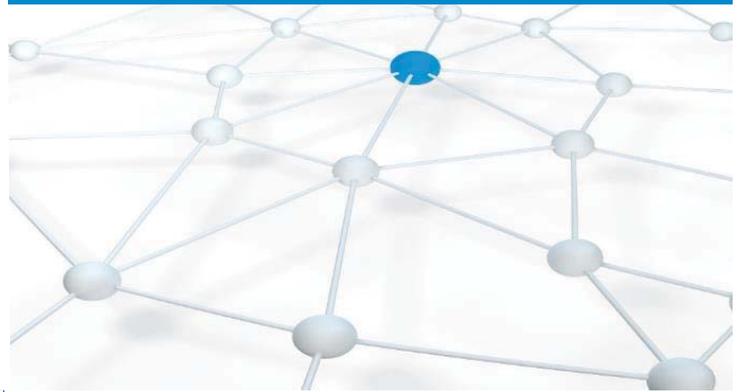
We focus on Tetra Pak rollout & we push new applications!

Rollout Tetra Pak



- Technology implementation on Tetra Pak system platforms
- Industrialization and preparation for volumes

New Applications



- Screen for new applications
- Partner up with key customers
- Application development and validation

FutureLab 2: Food purity

Imagine ...

... full confidence in packaged food.

The need

Packaging without toxic chemicals that migrate into the food. Standard inks and coatings in the food packaging industry use solvents and photoinitiators. Traditional curing processes often provide an incomplete cure, allowing these toxins to migrate into the food.

The innovation

ebeam-curable inks and coatings contain no solvents or photoinitiators. Ebeam provides an instant and complete cure while using < 1/5th of the energy.

This is more than just a dream.

ebeam is already the preferred way to cure inks and coatings.

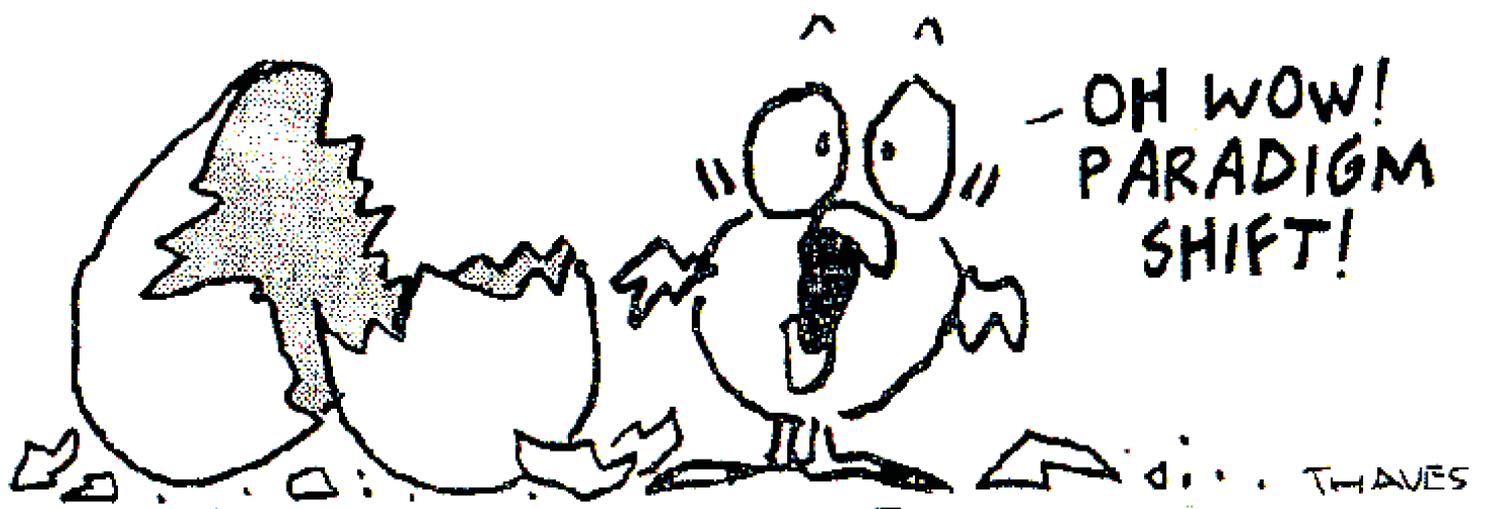


ebeam

From recycling to UPcycling

What is Upcycling?





ebeam



www.comet-ebeam.com