# The Food Chain Tool
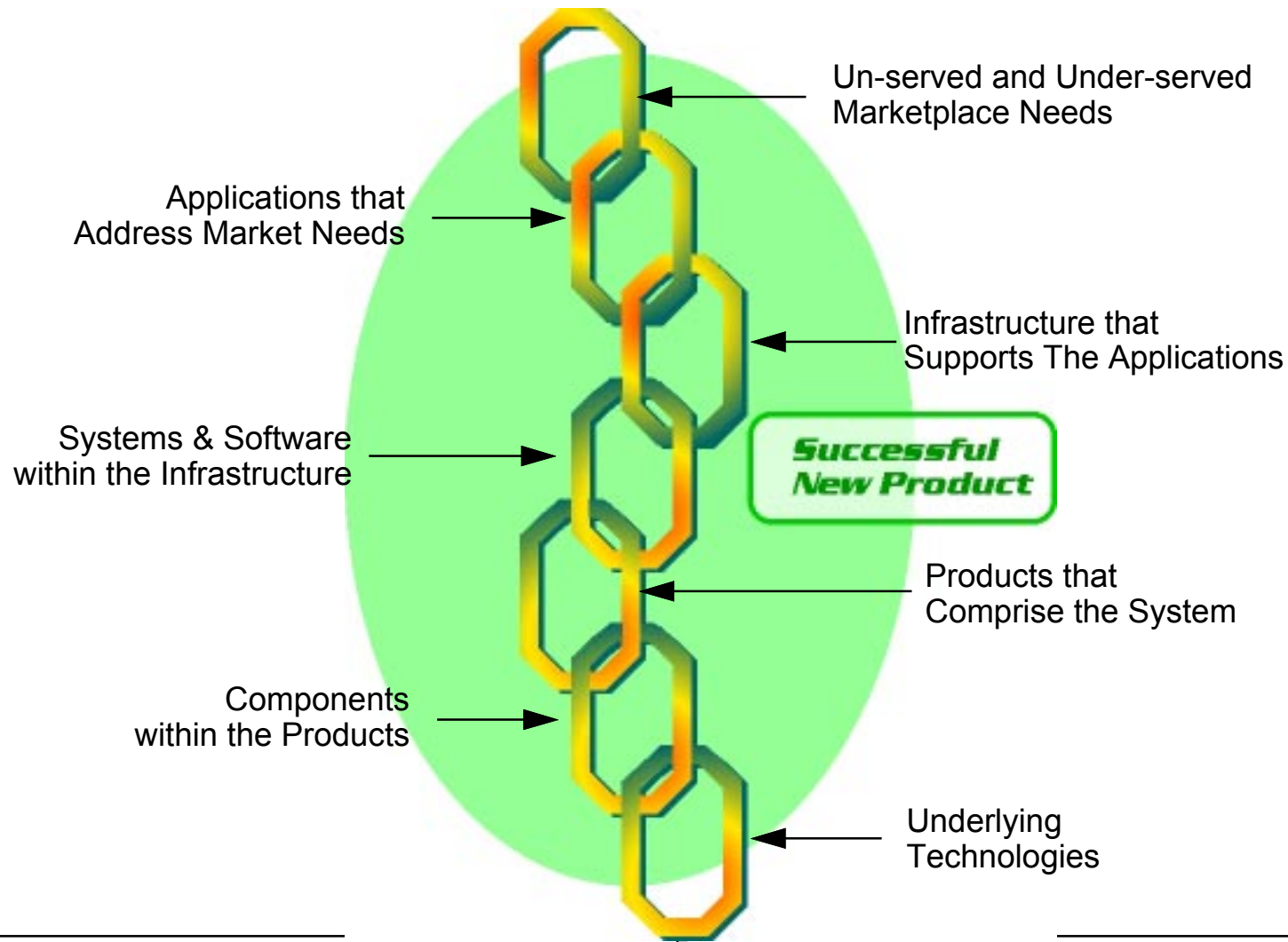
**Overview of The Tool**

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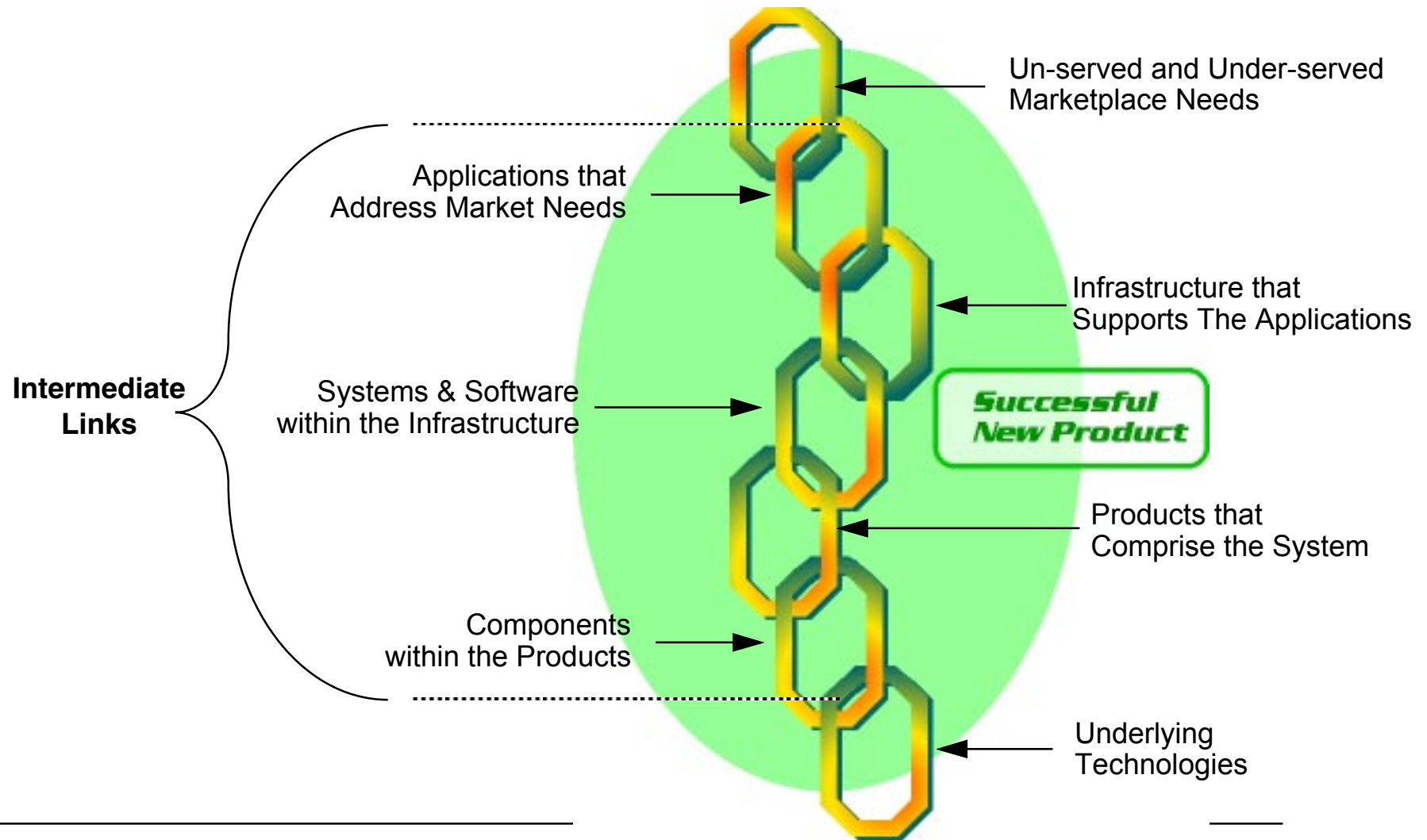eMail stu@lipoff.org
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The "food chain" is a tool used to link underlying technologies to market needs and is based on the idea that technology only has value when linked.

Un-served and Under-served Marketplace Needs

Applications that Address Market Needs

Infrastructure that Supports The Applications

Systems & Software within the Infrastructure

**Successful New Product**

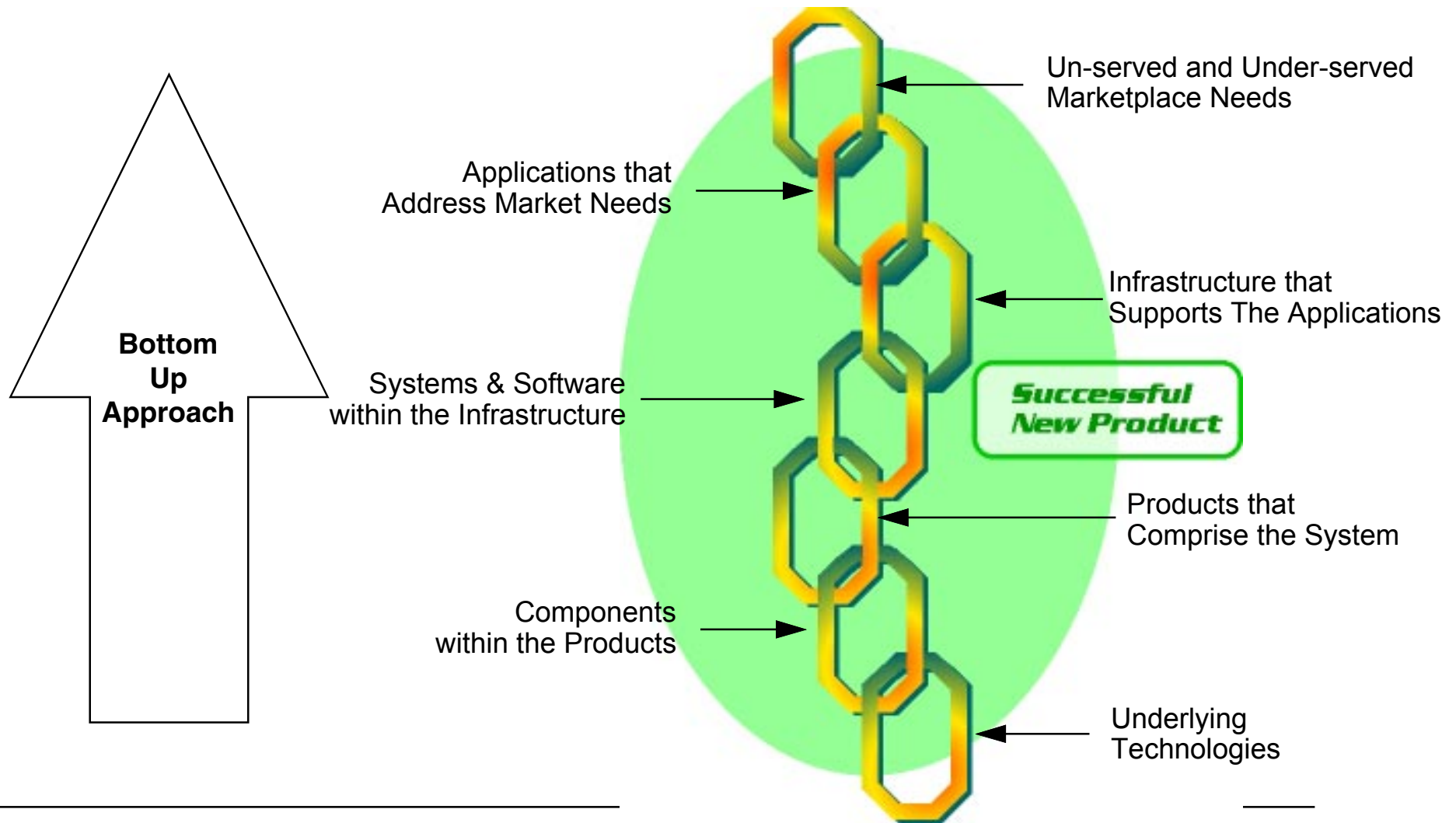Products that Comprise the System

Components within the Products

Underlying Technologies

Although a technology may map to a need, unlocking revenue requires completing the intermediate links as well.



Un-served and Under-served Marketplace Needs

Applications that Address Market Needs

Infrastructure that Supports The Applications

**Intermediate Links**

Systems & Software within the Infrastructure

*Successful New Product*
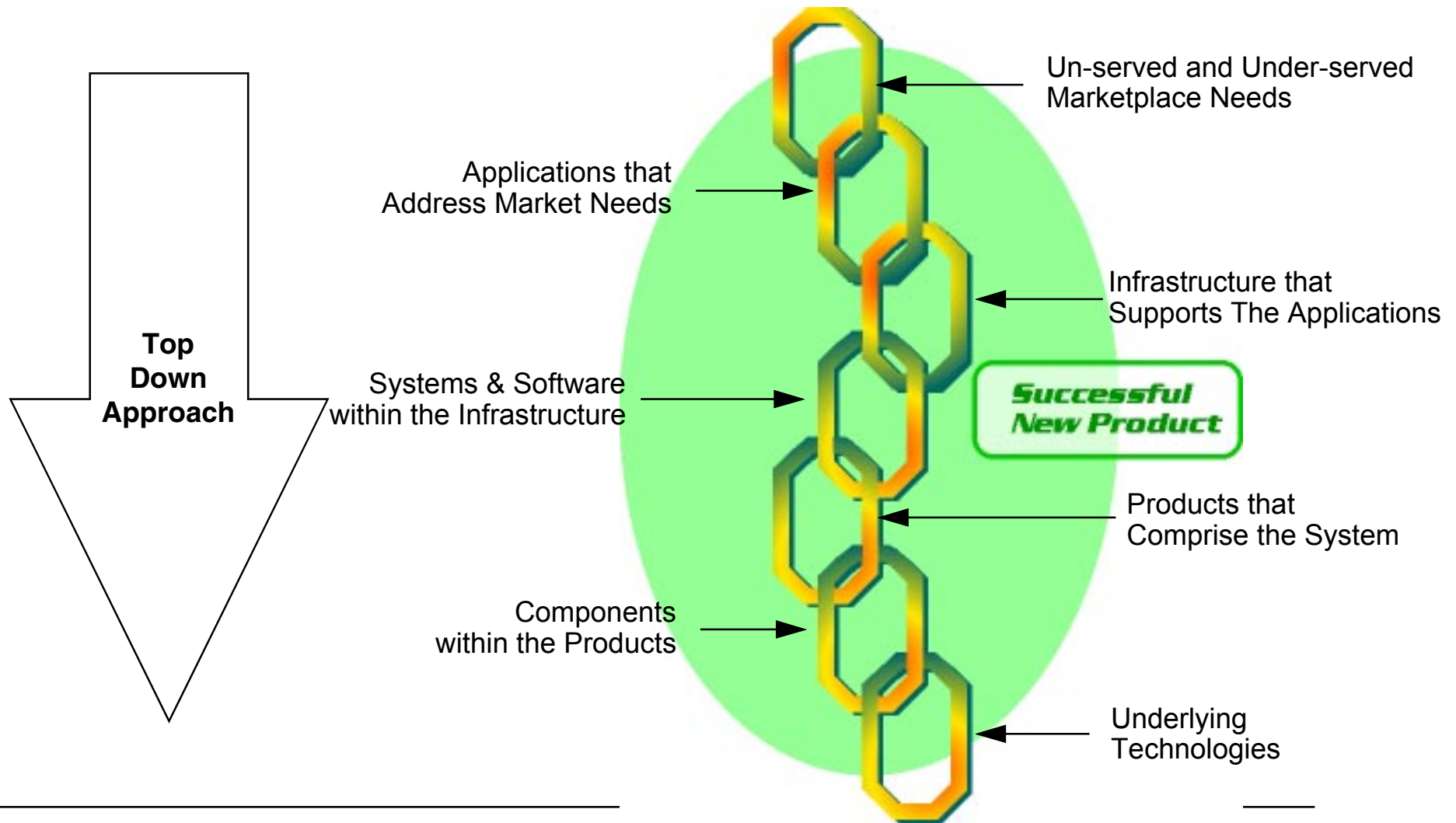
Products that Comprise the System

Components within the Products

Underlying Technologies

One approach is to start with a candidate technology at the top and work your way up the chain and attempt to discover or validate a market need.

Un-served and Under-served
Marketplace Needs

Applications that
Address Market Needs

Infrastructure that
Supports The Applications

**Bottom
Up
Approach**

Systems & Software
within the Infrastructure

*Successful
New Product*

Products that
Comprise the System

Components
within the Products

Underlying
Technologies

You can also start with a need and brainstorm down the chain to discover technology candidates.

**Top Down Approach**

Applications that Address Market Needs

Systems & Software within the Infrastructure

Components within the Products

Un-served and Under-served Marketplace Needs

Infrastructure that Supports The Applications
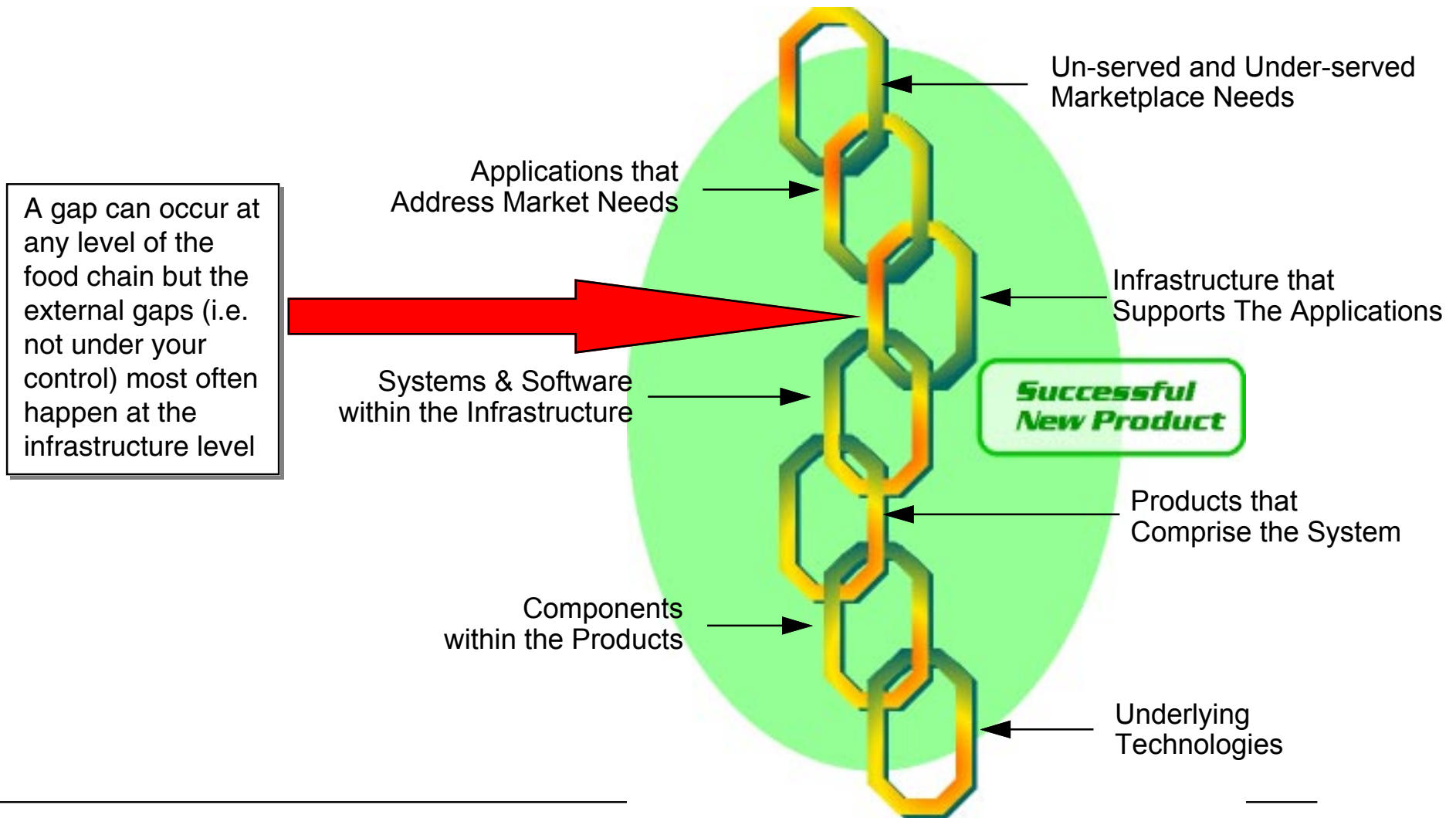
*Successful New Product*

Products that Comprise the System

Underlying Technologies

You can also derive insights by starting with a product or application and brainstorming in both directions.

Un-served and Under-served Marketplace Needs

Applications that Address Market Needs

Infrastructure that Supports The Applications

Systems & Software within the Infrastructure

*Successful New Product*

Products that Comprise the System

Components within the Products
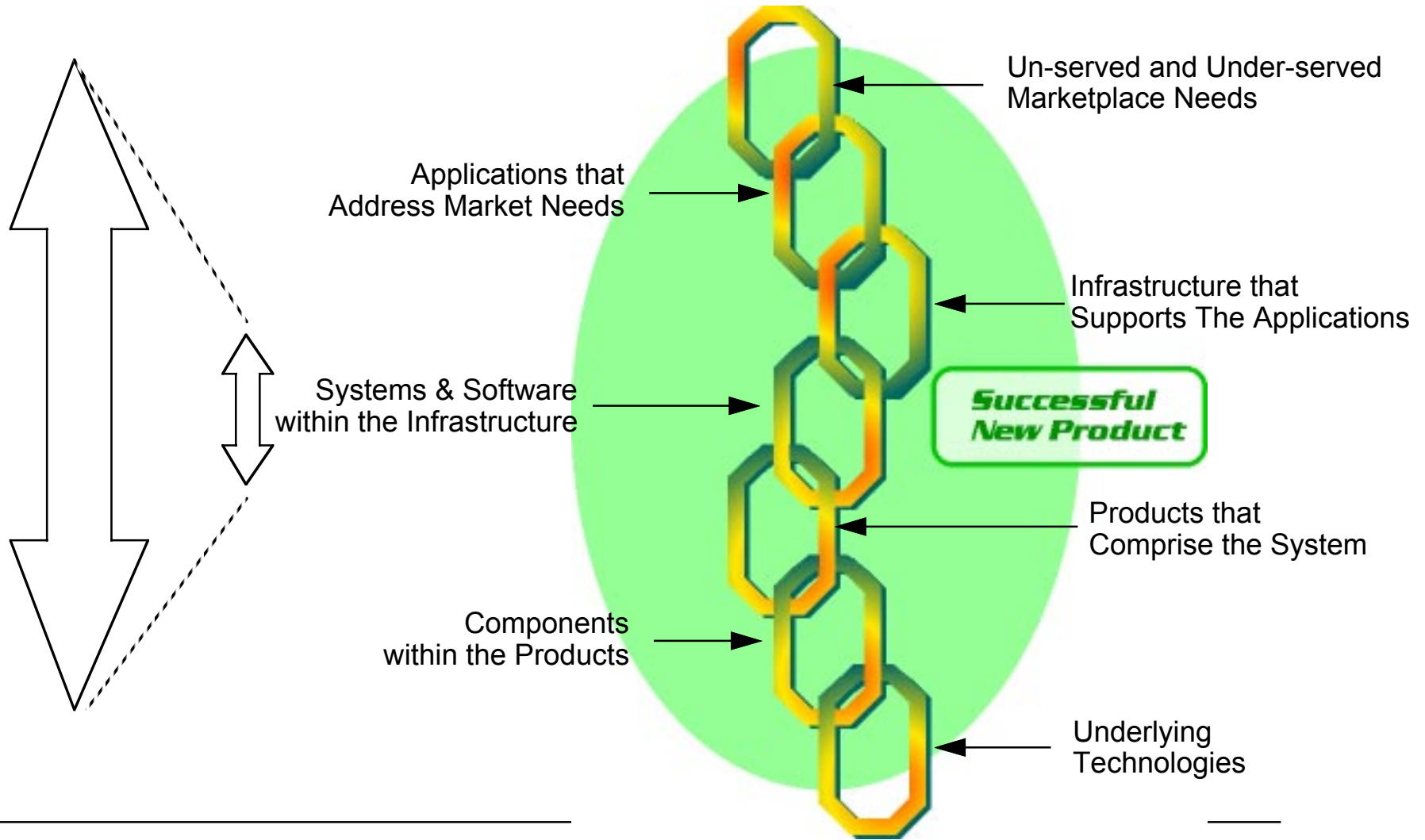
Underlying Technologies

The failure to satisfy a link identifies a gap that must be closed before revenue can be generated.

Un-served and Under-served Marketplace Needs

Applications that Address Market Needs

A gap can occur at any level of the food chain but the external gaps (i.e. not under your control) most often happen at the infrastructure level

Infrastructure that Supports The Applications

*Successful New Product*

Systems & Software within the Infrastructure

Products that Comprise the System

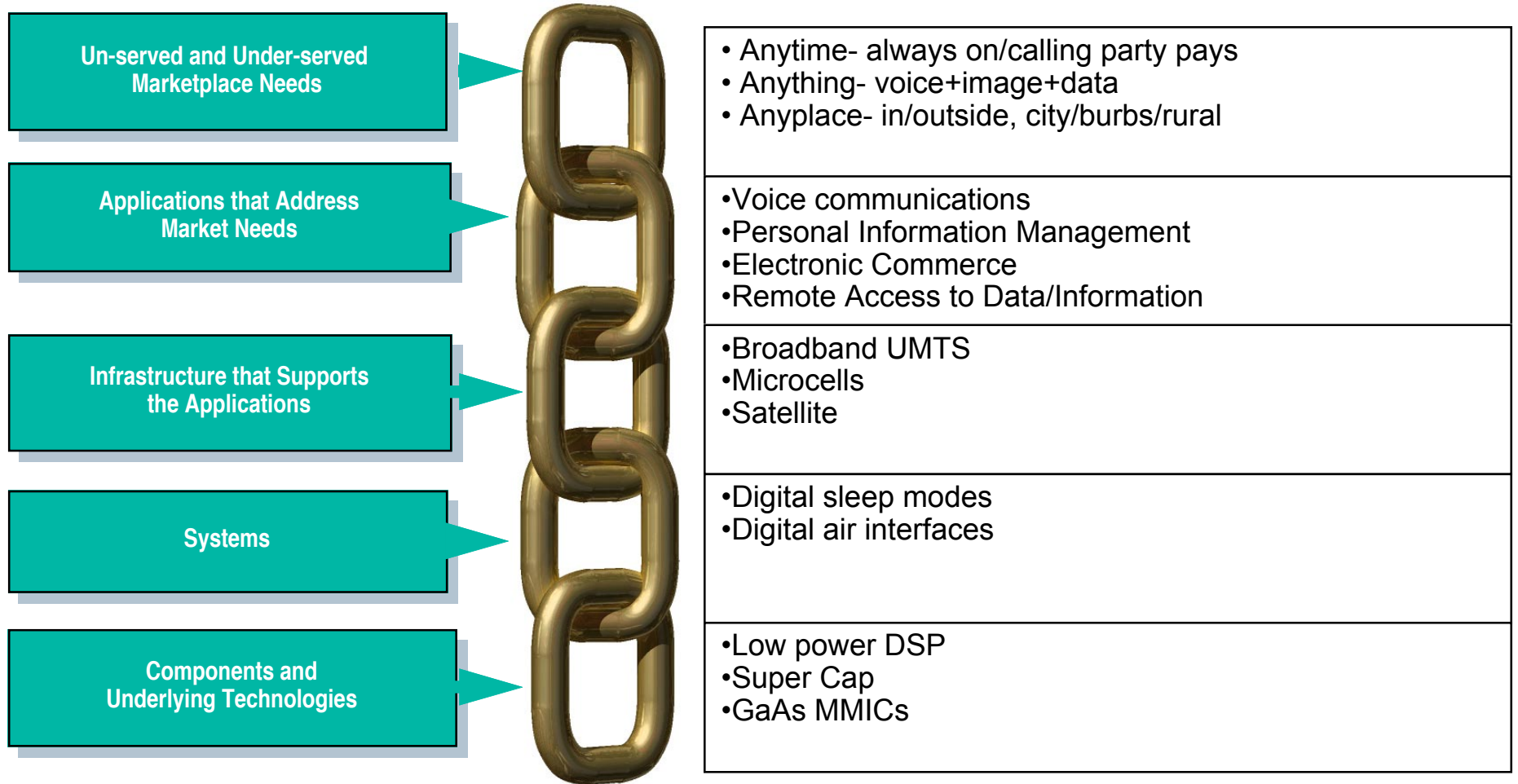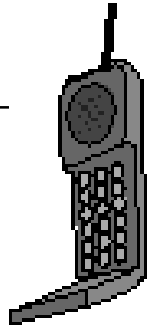Components within the Products

Underlying Technologies

In summary this tool can be used as follows as part of the planning process.

- Brainstorm at each level of the food chain

- Identify the stakeholders at each level- who will win/who might lose

- Identify the barriers and drivers:
  - Economic
  - Structure
  - Social
  - Regulatory

- Link the technologies at the bottom up through the food chain to the needs

- Identify any gaps/missing links

- Consider both the external market drivers or actions under control of IDCC to predict the timing of the links closing and develop strategies that align with the timing and resources available

This analysis leads to some specific technologies which can be the subject of further investment.

| | |
|---|---|
| **Un-served and Under-served Marketplace Needs** | • Anytime- always on/calling party pays<br>• Anything- voice+image+data<br>• Anyplace- in/outside, city/burbs/rural |
| **Applications that Address Market Needs** | •Voice communications<br>•Personal Information Management<br>•Electronic Commerce<br>•Remote Access to Data/Information |
| **Infrastructure that Supports the Applications** | •Broadband UMTS<br>•Microcells<br>•Satellite |
| **Systems** | •Digital sleep modes<br>•Digital air interfaces |
| **Components and Underlying Technologies** | •Low power DSP<br>•Super Cap<br>•GaAs MMICs |

# Each client has their own list, but a general list of criteria include:

- Technology expertise
- Customer base
- Operational synergies
- Intellectual property base
- Alignment with strategy
- Alignment with culture
- Other assets?
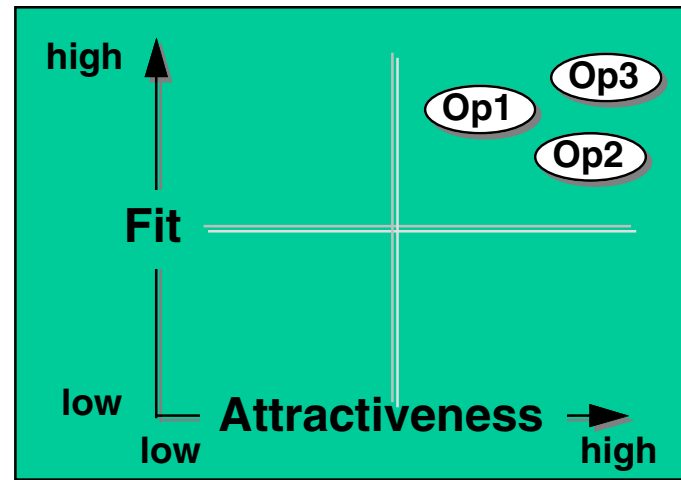


- Market size potential
- Growth potential
- Maturity
- Competitive intensity
- Start time
- Barriers to competitive entry
- Available partners