

IPRO 358

Product Development and Business Planning for a Fishing Innovation



Presented by

Robert Boyer, Rachel Choitz, and
Jimmy Ton

Outline

Sponsor

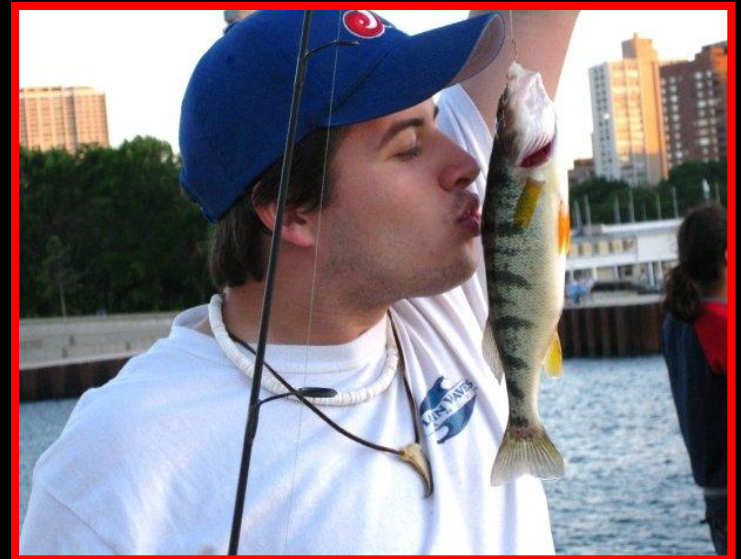
Problem and solution

Team organization

Project goals and progress

Challenges

Recommendations



Sponsor



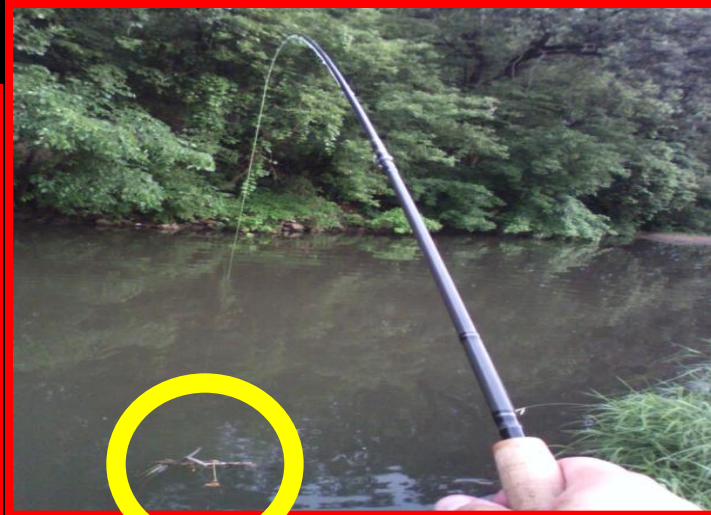
SPARROWHAWK™



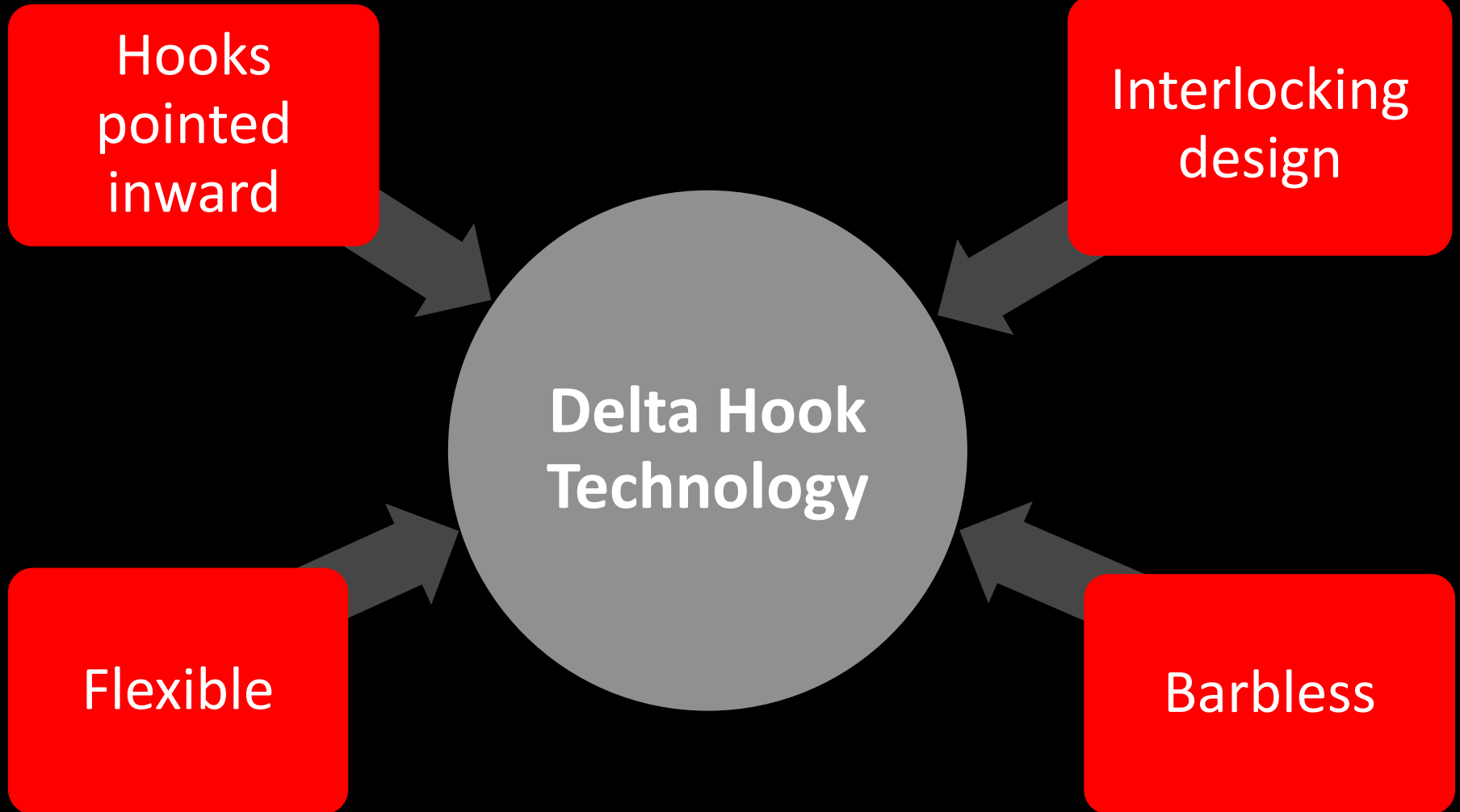
Augy Park, CEO

DELTA 
HOOK TECHNOLOGY

Problems



Solution



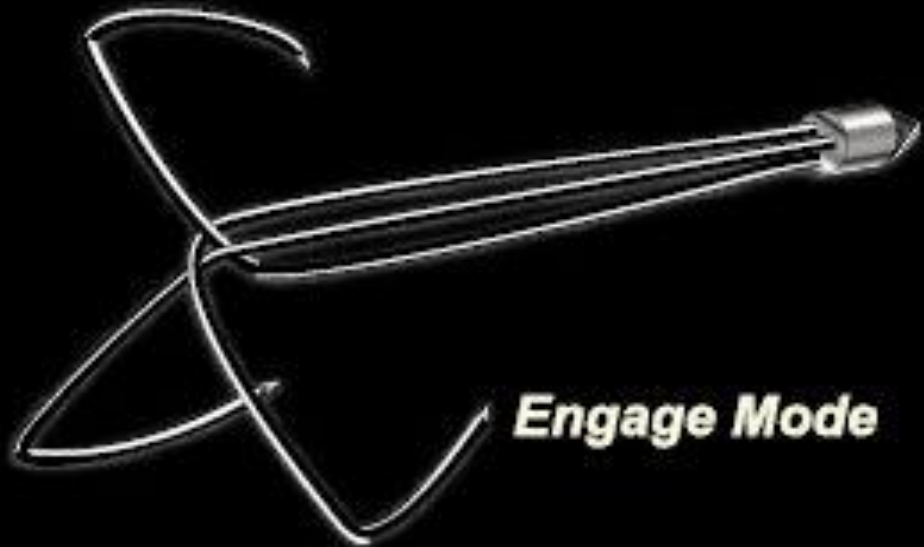
Original model

Standard Mode

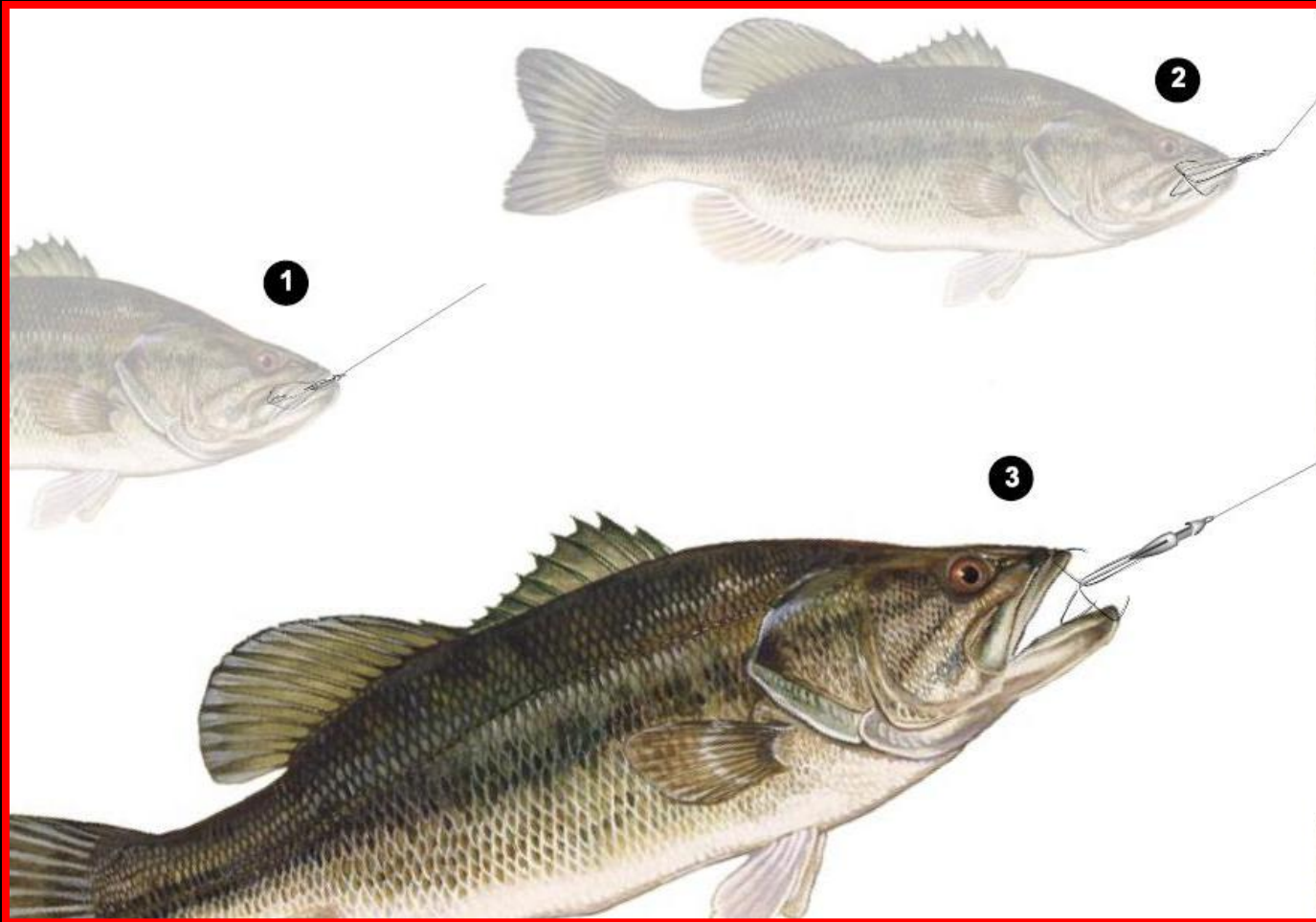


DELTA
HOOK TECHNOLOGY

Engage Mode



Hook mechanism



Team Organization

The Team



**Overall Team
Leader-Robert
Boyer**



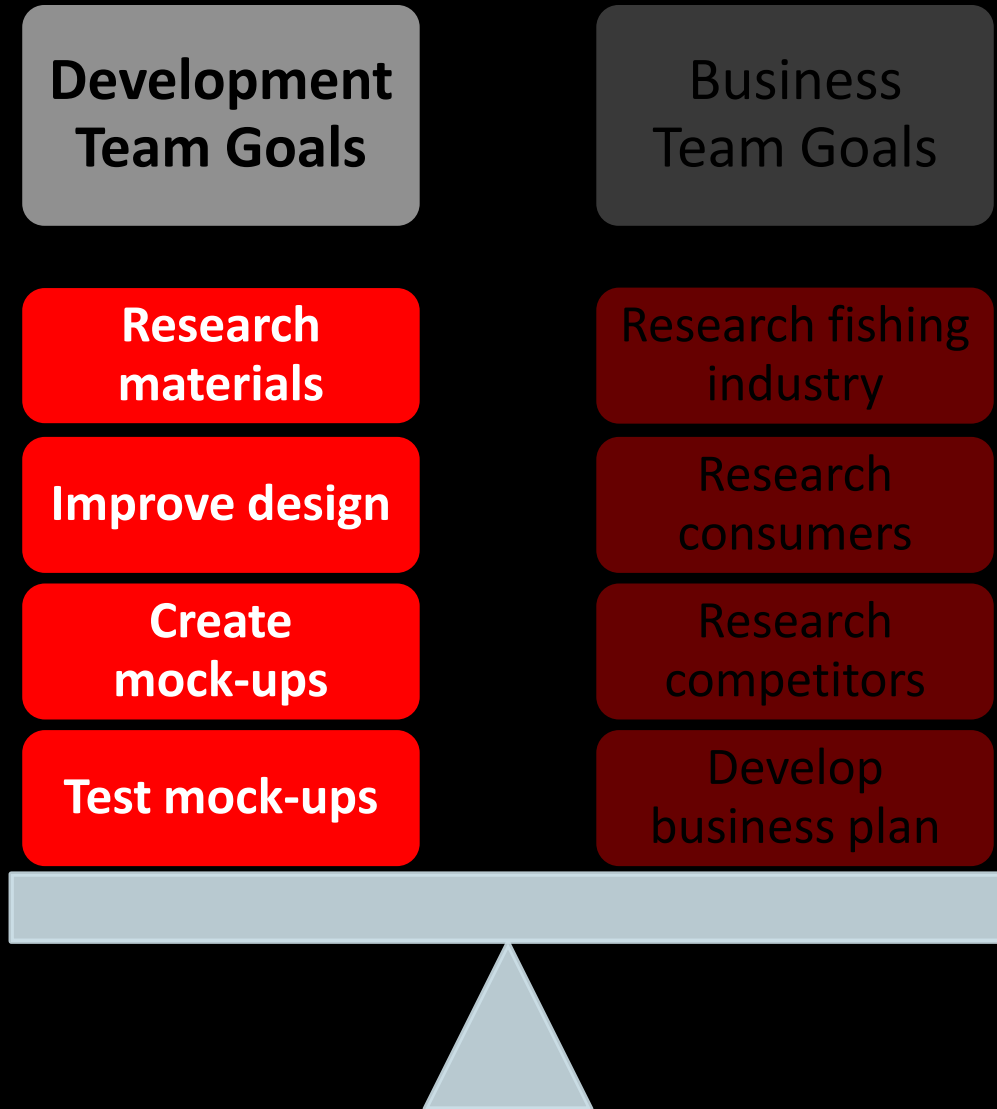
**Business Team
Leader-
Bogdan
Bistriceanu**



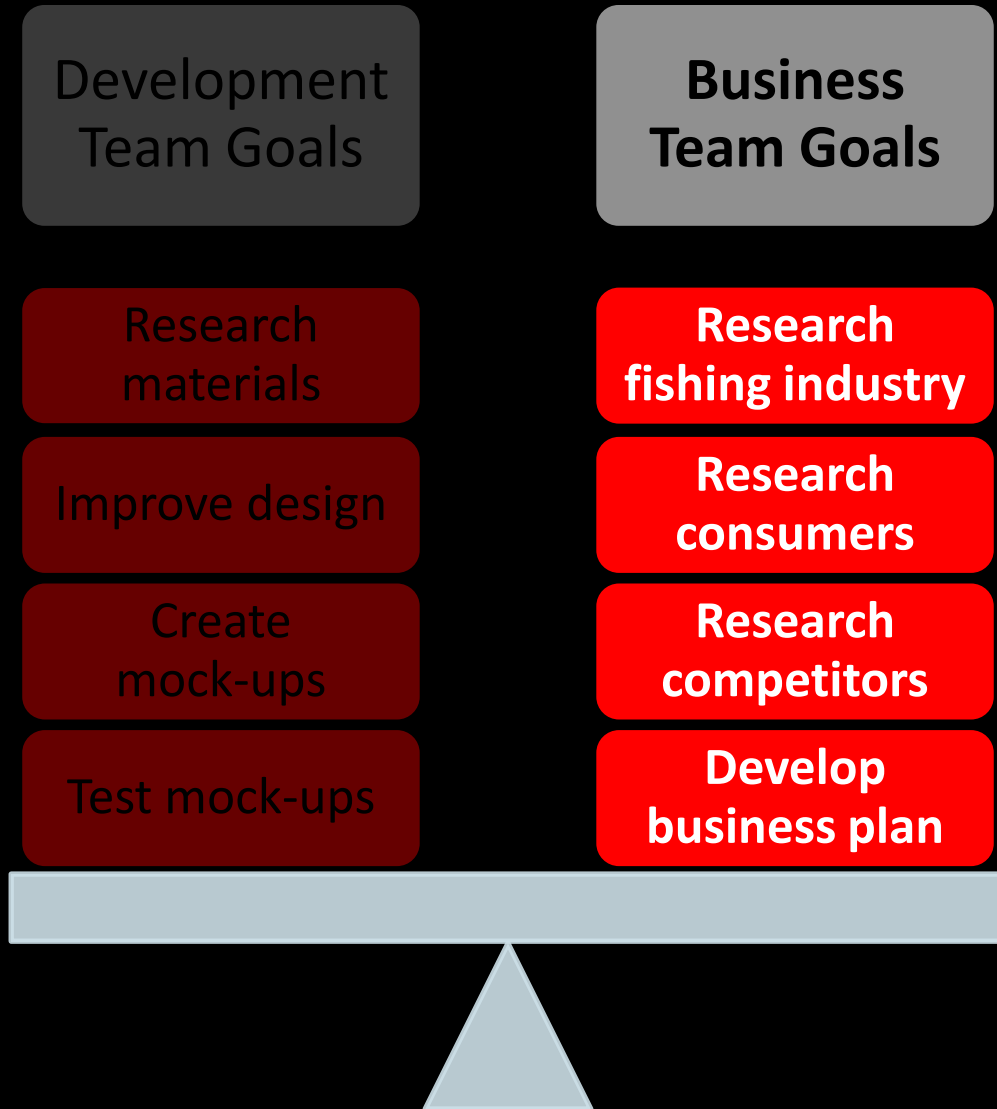
**Development
Team Leader-
Patrick Zhu**



Goals



Goals



Development Team Progress

Formulated
design
concepts



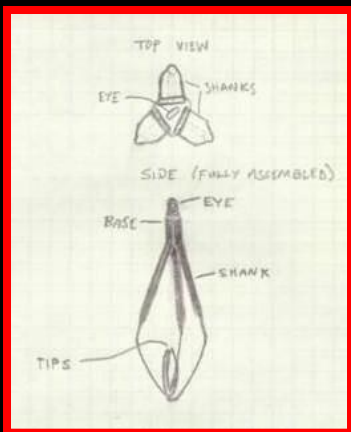
Acquired
materials



Created
test series



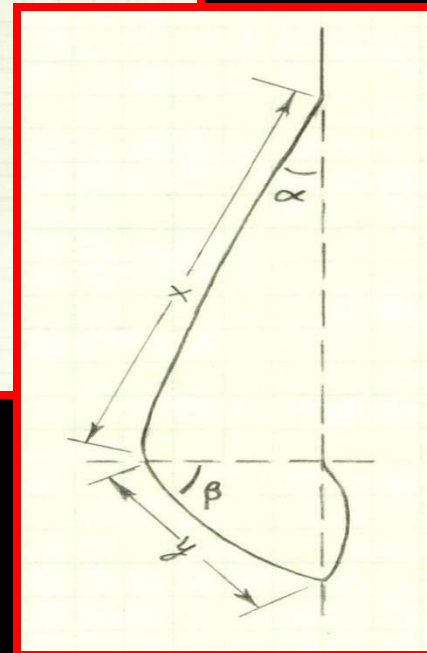
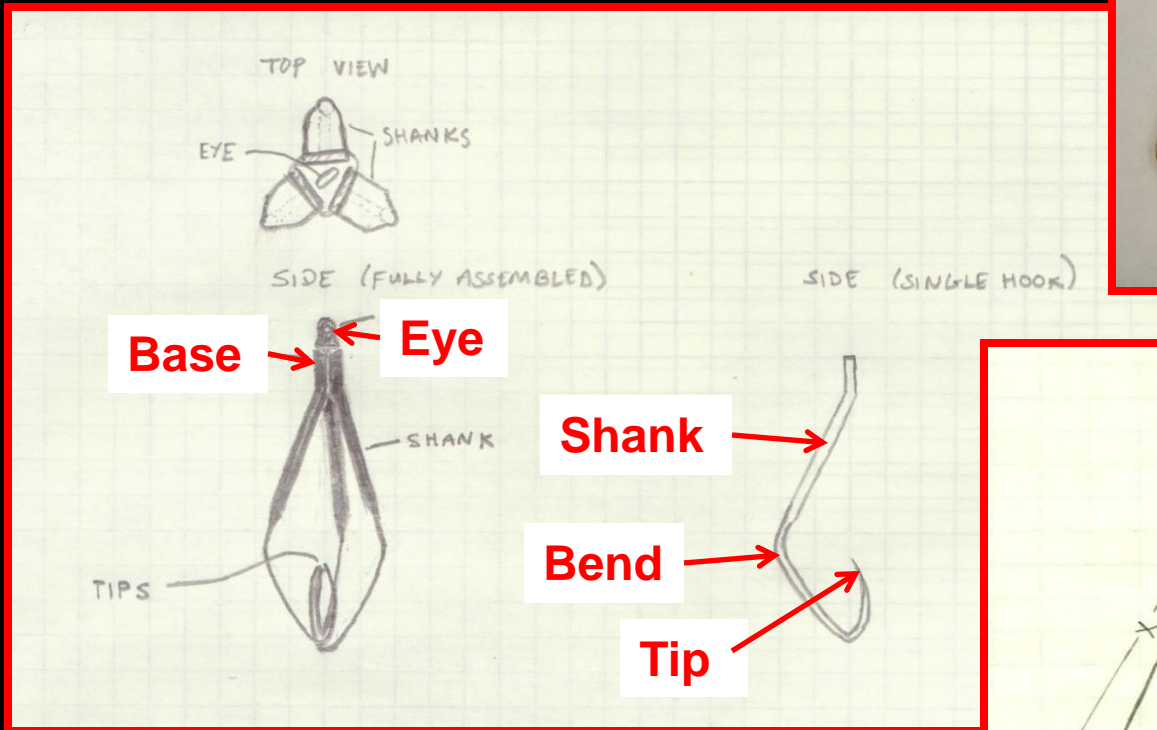
Researched
materials



Created
mock-ups



Design Concept



Material Selection

Thin and rigid

Supports weight of fish

Flexibility

Easily manipulated



Mock-ups

Mock-up 1 Mock-up 2 Actual hook size



Test Series

Tensile

Bending

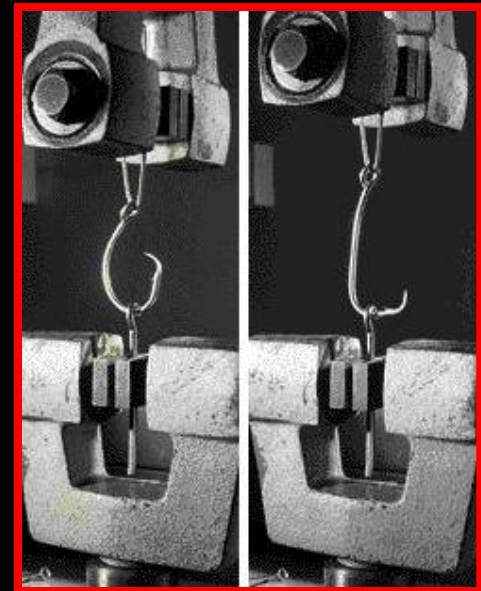
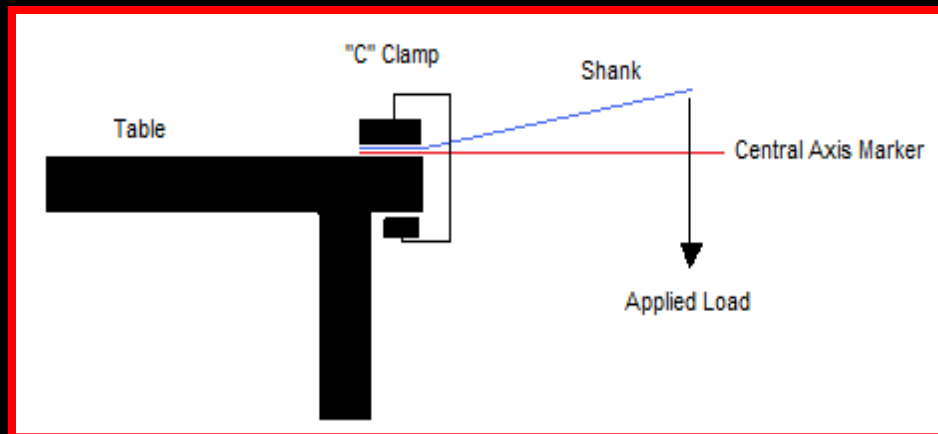
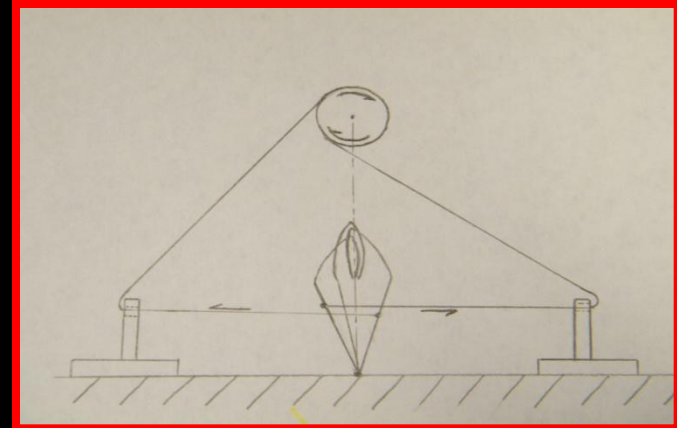
Fatigue

Hook setting

Snag

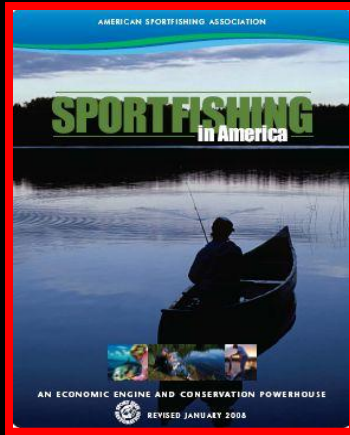
Customer satisfaction

Corrosion



Business Team Progress

Analyzed
industry
reports



Researched
consumers

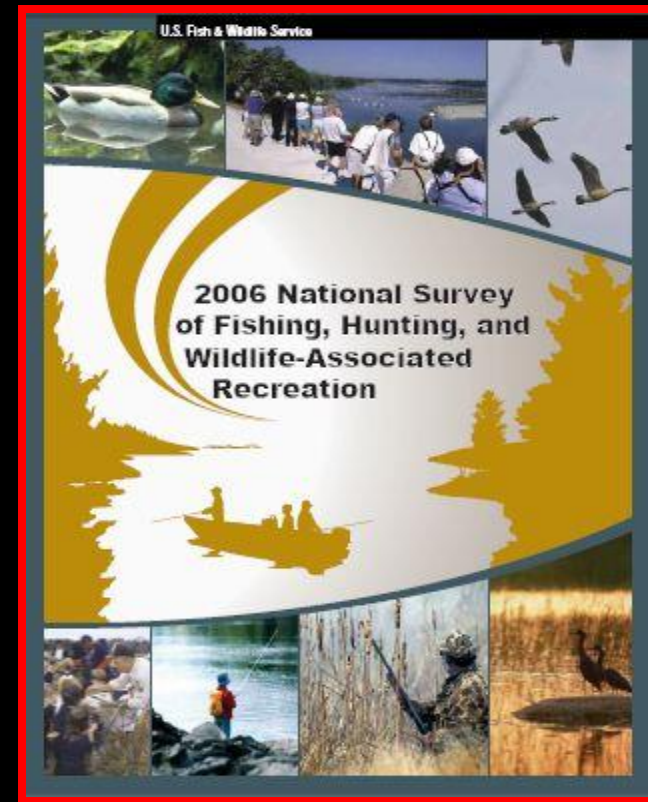
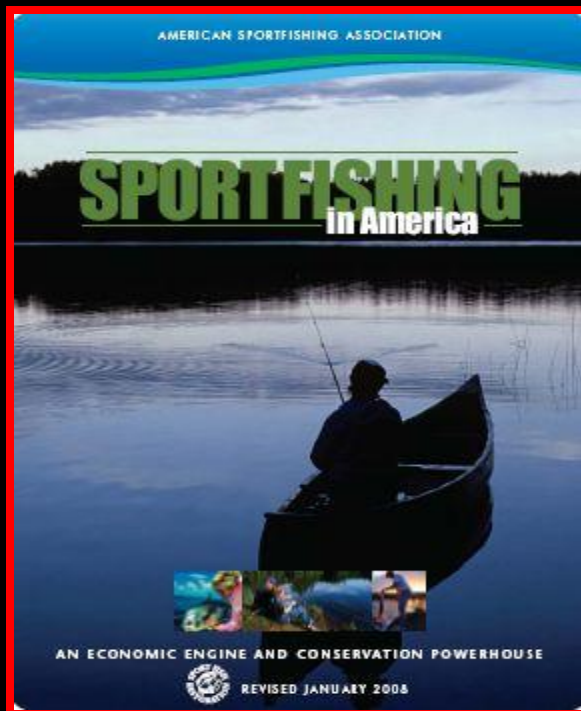


Researched
competitors

Identified
target
markets

Industry Reports

ASA Fishing Report Sportfishing in America



U.S Fish and Wildlife Service National Survey of Fishing

Competitors

Pricing

Features

Materials



Consumer Research



Target Markets

Professional anglers



Young anglers

Challenges



Fishing Trip



Ethics



Results and Achievements

Conducted extensive research

Compiled list of potential materials

Created mock-ups

Created comparative tests

Conducted & analyzed survey

Recommendations

Create & test new mock-ups

Implement testing methods

Develop manufacturing process

Continue surveys

Continue development of business plan

Acknowledgements

Augy Park, CEO Sparrowhawk LLC

Faculty advisors:

Prof. David Gatchell & Prof. John Stoner

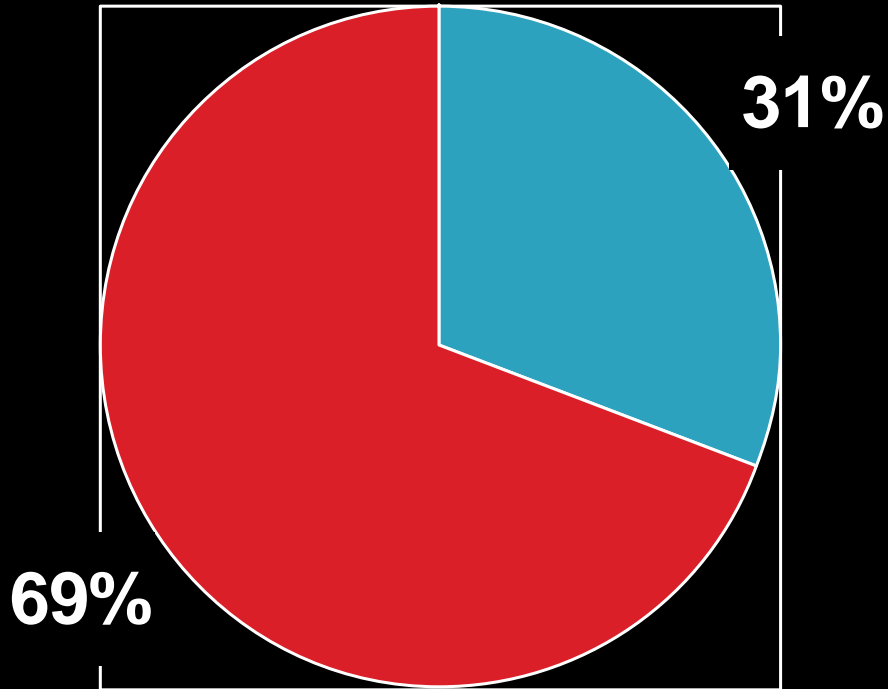
Dr. Ronald Kirschner, President, Heartland
Angels

Prof. Mostovoy

Bass Pro Shop, Cabela's, Henry's Sport Shop

Questions?

Market Breakdown



- **Terminal Tackle (hooks, sinkers, swivels)**
 - \$399 Million
- **Fishing Lures & Artificial Bait**
 - \$905 Million

Material Selection

Thin and rigid

Fish hook can be secured in the fish without the hook deforming

Supports weight of fish

24lbs – Largest Largemouth bass caught

Flexible/ linear flexibility

elastic modulus, hendrix.com

Easily manipulated

Can be formed easily and then hardened.

Hi-Carbon steel nor-tempered

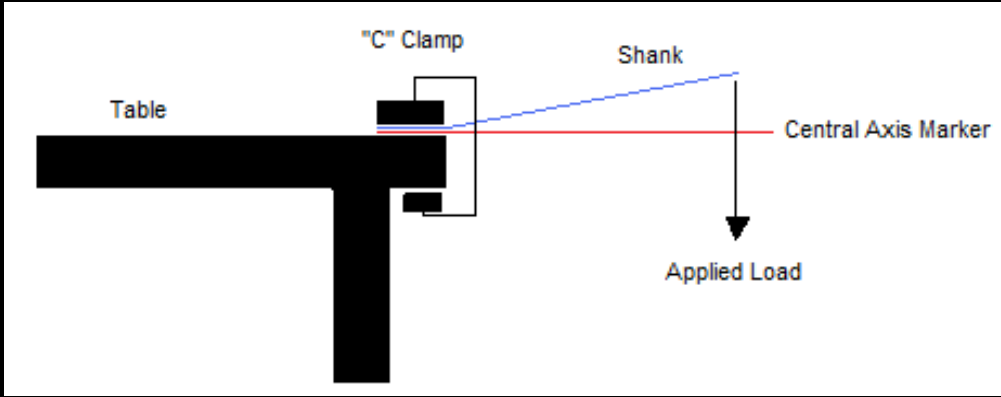


Competitors

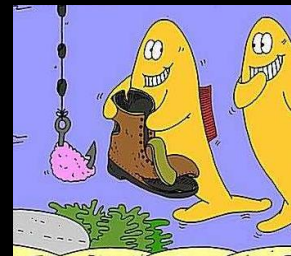
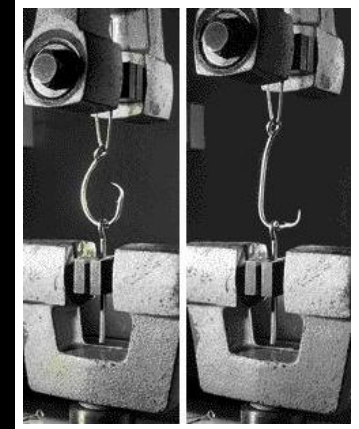
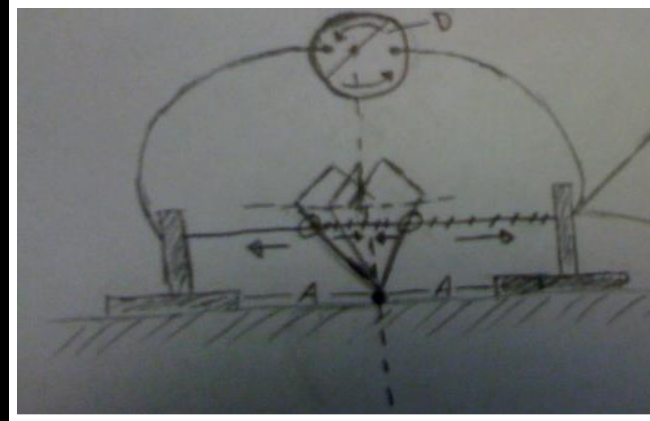
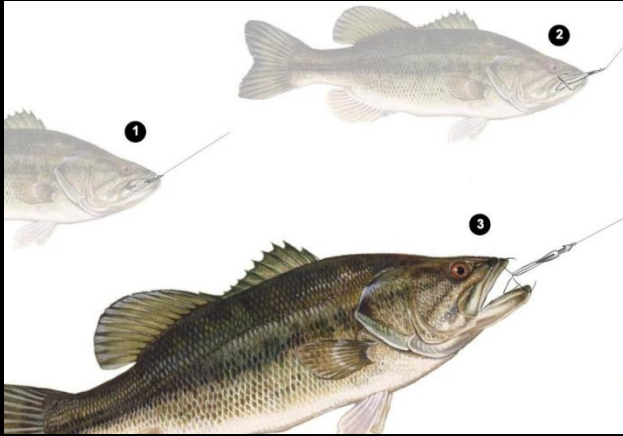


Daiichi[®]
World's Sharpest Hooks

Testing



Stainless		3%
Duratin		8%
Double Nickel		30%
Red Lacquer		30%
Tin		30%
Black Lacquer		33%
Black Nickel		40%
Bronzed Lacquer		44%
Blue Lacquer		50%
Nickel		52%
Gold		70%



Ethics

Patent pending

Public v. private meeting/testing location

Market survey

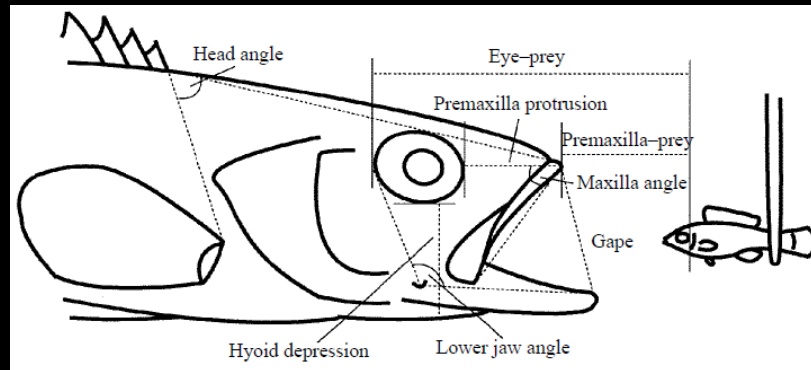
Material selection

Sponsor's requests

Team Dynamics

- Fishing trip = bonding time & learning fishing terms
- Typical Agenda
 - Discuss team goals and progress
 - Separate into sub-groups
 - Brief members of other sub-group
- Cross-pollination of sub-groups encouraged
- Sub-team reports
- Voting system

Research

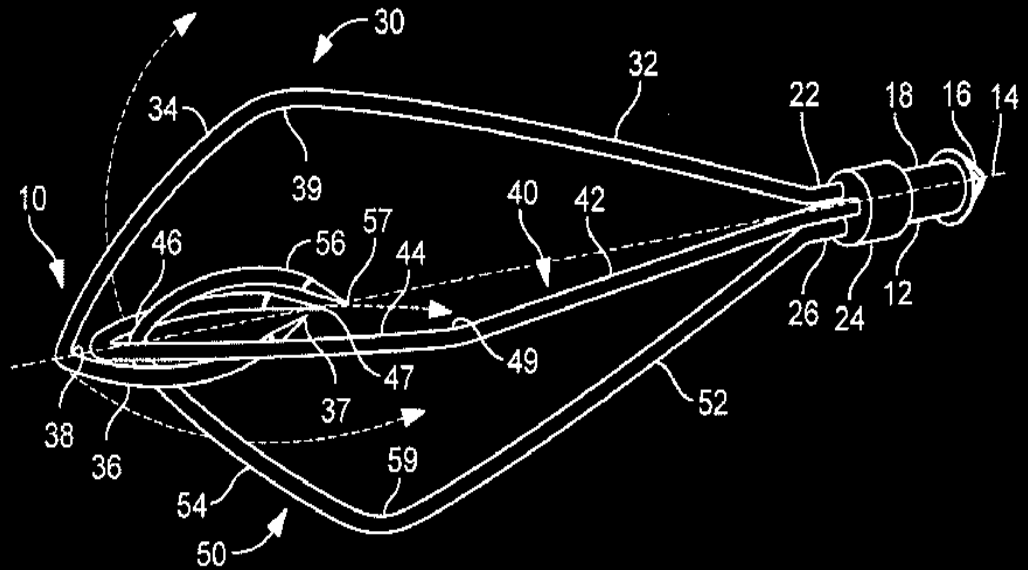


Patent & Investment

Utility patent pending

Application published 18 months after filing
(June 18th, 2009)

Prosecution by Brinks, Hofer, Gilson & Lione of
Chicago



Business Plan



Survey Results

64 % of anglers spend less than 75 cents per hook

78% would be willing to pay an average of \$2.00 per hook if it was safe, barb less, weed less and hold fish after catch

55% prefer big outdoor retailers that offer a big variety and latest fishing gear over discount retailers (30%) or local bait shops (15%)

Most important hook feature is catch and hold (68%), followed by barb less (48%), weed less (38%) and safety (36%)

64% of the anglers are accompanied by children when fishing

78% had over 10 years experience fishing

47% go fishing more than 20 times a year and more than 2/3 of them (69%) buy more than 20 fishing hooks per year