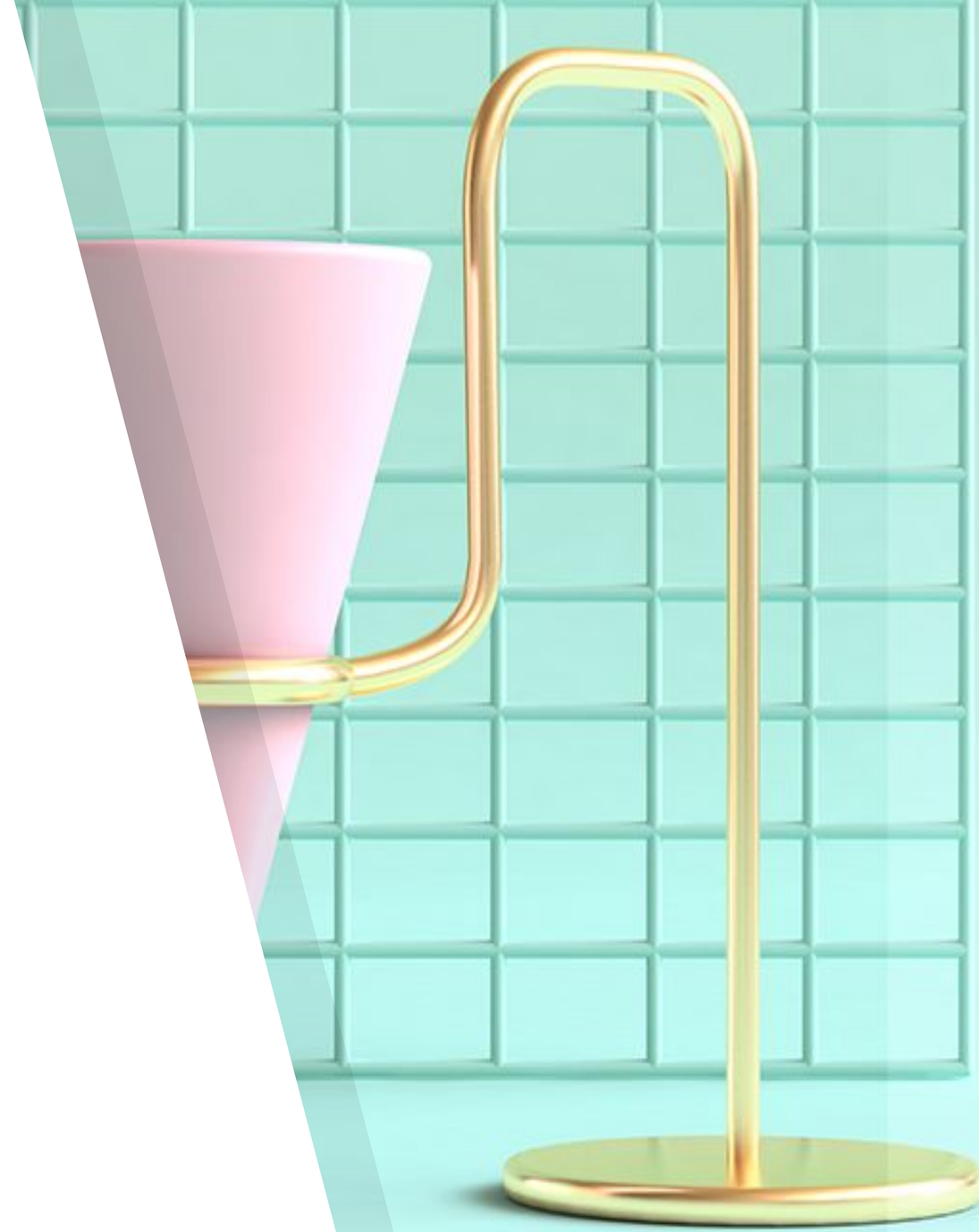
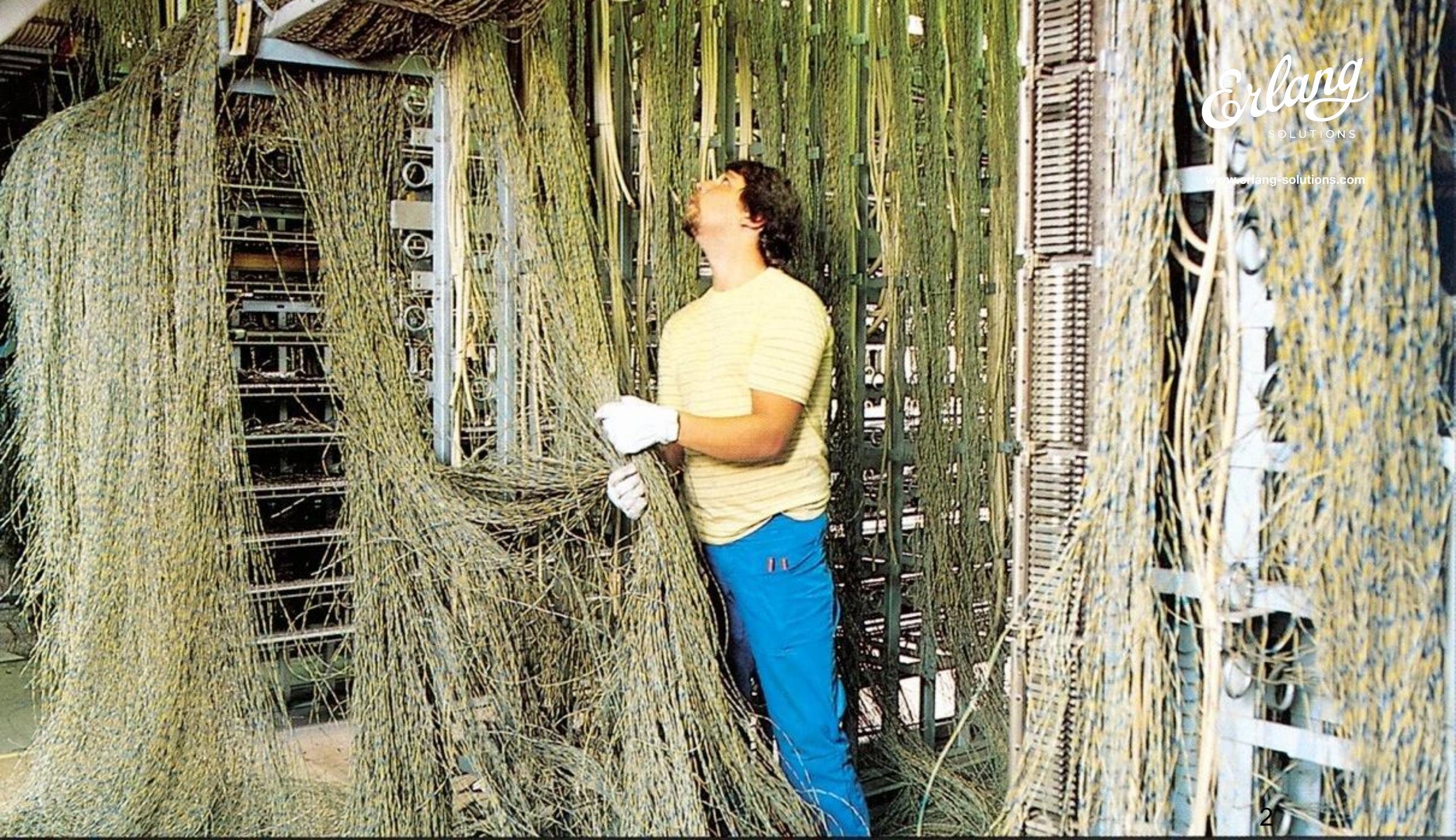
Why Erlang?



Erlang SOLUTIONS



Erlang
SOLUTIONS

www.erlang-solutions.com

Problem domain

- Handle a very large numbers of concurrent activities
- Actions must be performed at a certain point in time or within a certain time
- System distributed over several computers
- Interaction with hardware
- Very large software system
- Complex functionality such as feature interaction
- Continuous operation over many years
- Software maintenance without stopping the system
- Stringent quality and reliability requirements.
- Fault tolerance both to hardware failures and software errors

Bjarne Däcker, November 2000 - Licentiate Thesis

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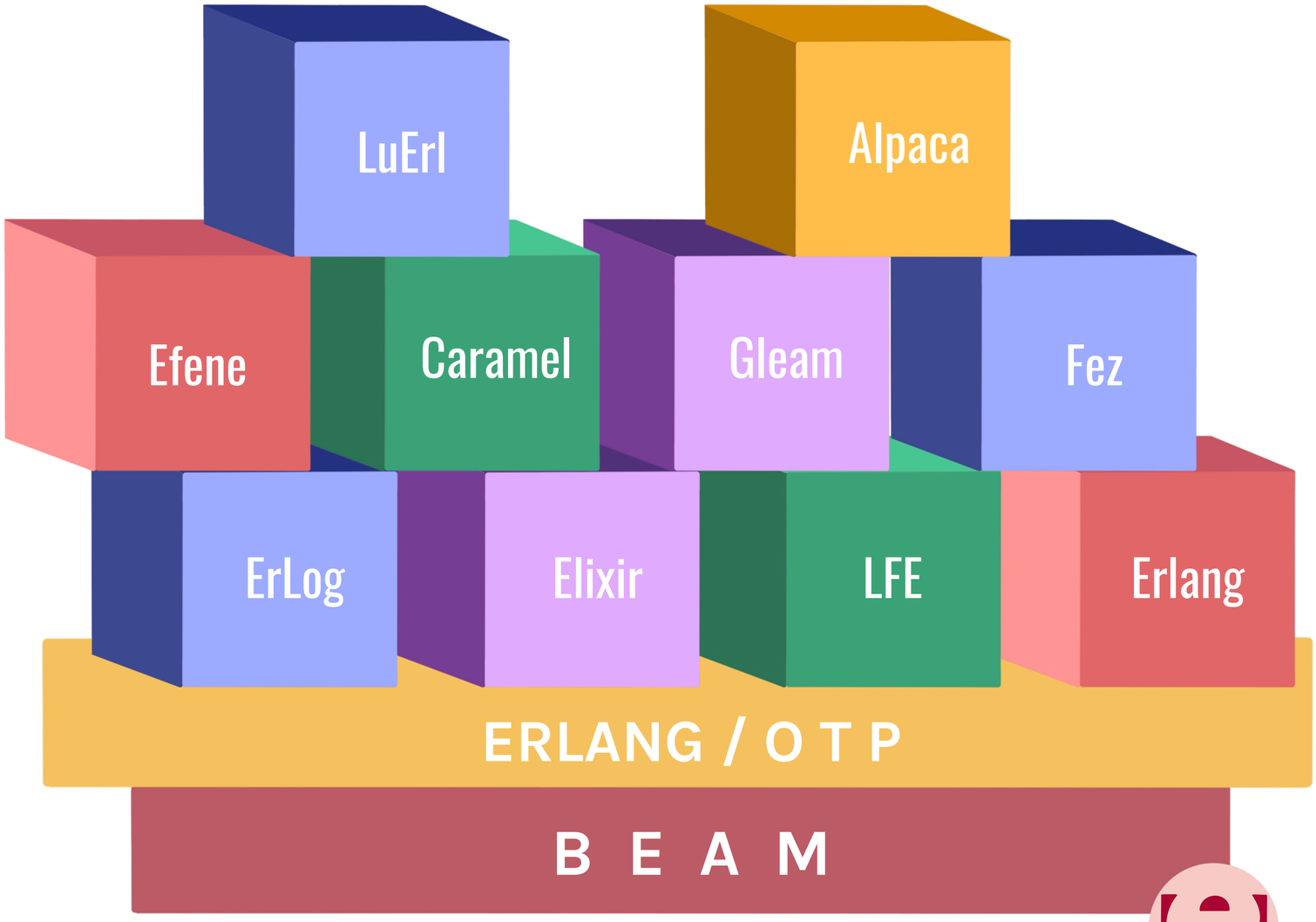
Erlang & the BEAM

- Scales to millions of processes per VM
- No stop the world Garbage Collection
- Language Semantics
  - Distribution
  - Error Handling
  - Concurrency
- Multi-core support in the programming model
- VM Introspection
- Hot-code loading
- Easy to integrate NIFs in C, Go & Rust

A Language becomes an Ecosystem

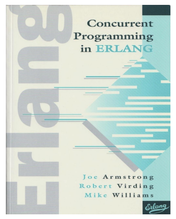


Erlang SOLUTIONS

A Language becomes an Ecosystem

Experiments started at the Computer Science Lab

First Erlang Book Published



OTP R1 released

Erlang Solutions is founded

Erlang SOLUTIONS

O'Reilly Books

Elixir

1987 1989 1991 1993 1995 1997 1999 ... 2005 2007 2009 2011 2013

First C-Based Virtual Machine

First Erlang product launched

ERICSSON

Released as Open Source

Erlang R11 goes multicore

Commercial Erlang Conferences

Erlang goes GitHub

LFE

Who is using Erlang?

What's in a name?

- **Erlang, Agner Krarup, 1878-1929**

  Danish mathematician. One of the founders of the theory of tele-traffic and queue theory used for dimensioning telephone exchanges and networks

- $$\frac{A^n/n!}{1+ A + A^2/2! + \ldots + A^n/n!}$$

  Erlang's formula. This formula computes the probability that all lines are busy in a system with **n** lines and a total traffic intensity **A** (measured in erlang)

- **erlang**

  Unit of measurement for traffic intensity, e.g. the average number of simultaneous calls through a telephone exchange.

Background

- Problem Domain
- Erlang & the BEAM
- A language Becomes an Ecosystem
- Who is using Erlang?
- What's in a name?