

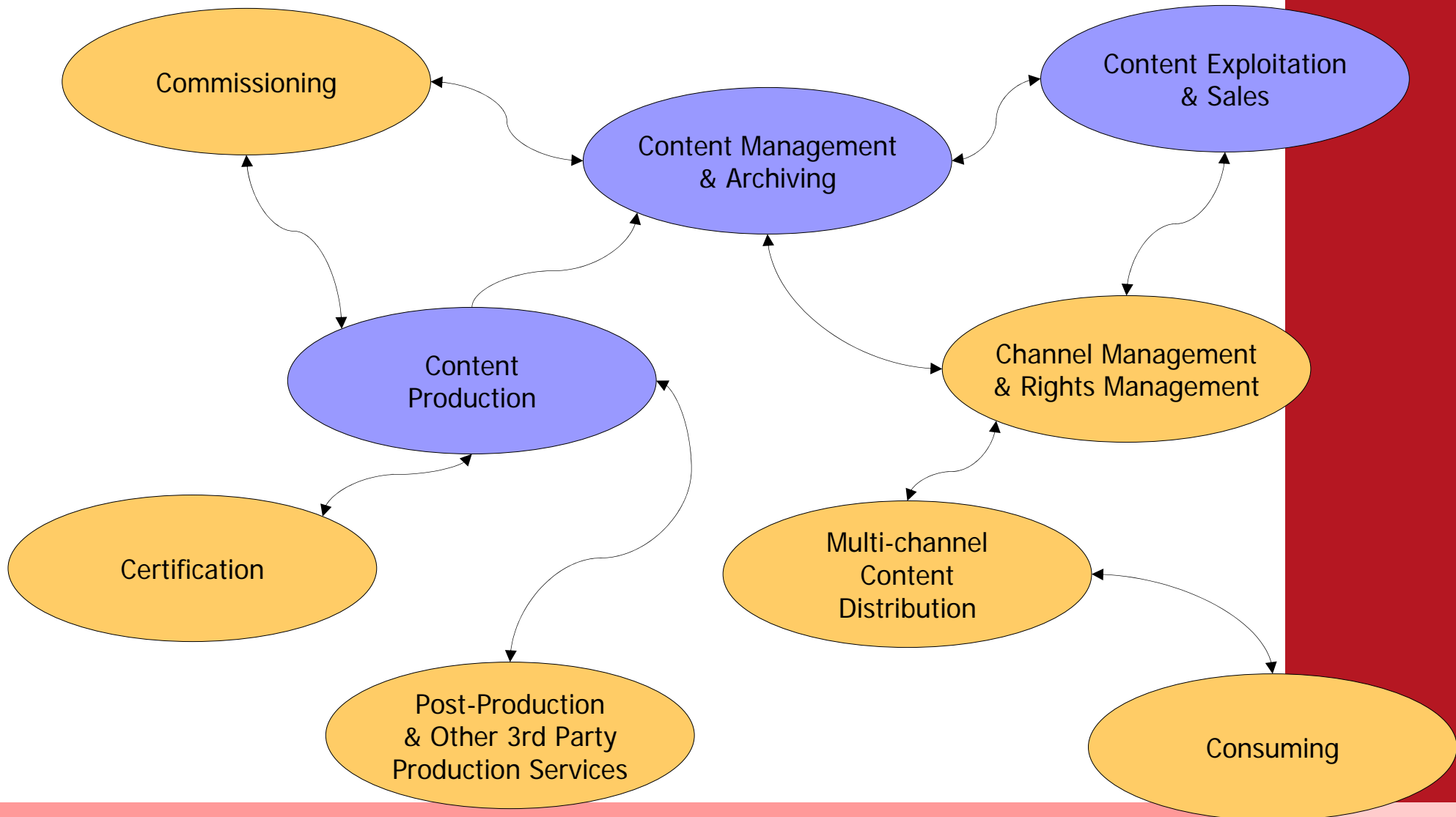
digital Content Management

A process and technology framework that enables the digital management of rich media, focused on exploiting content as strategic resources and commercial assets.

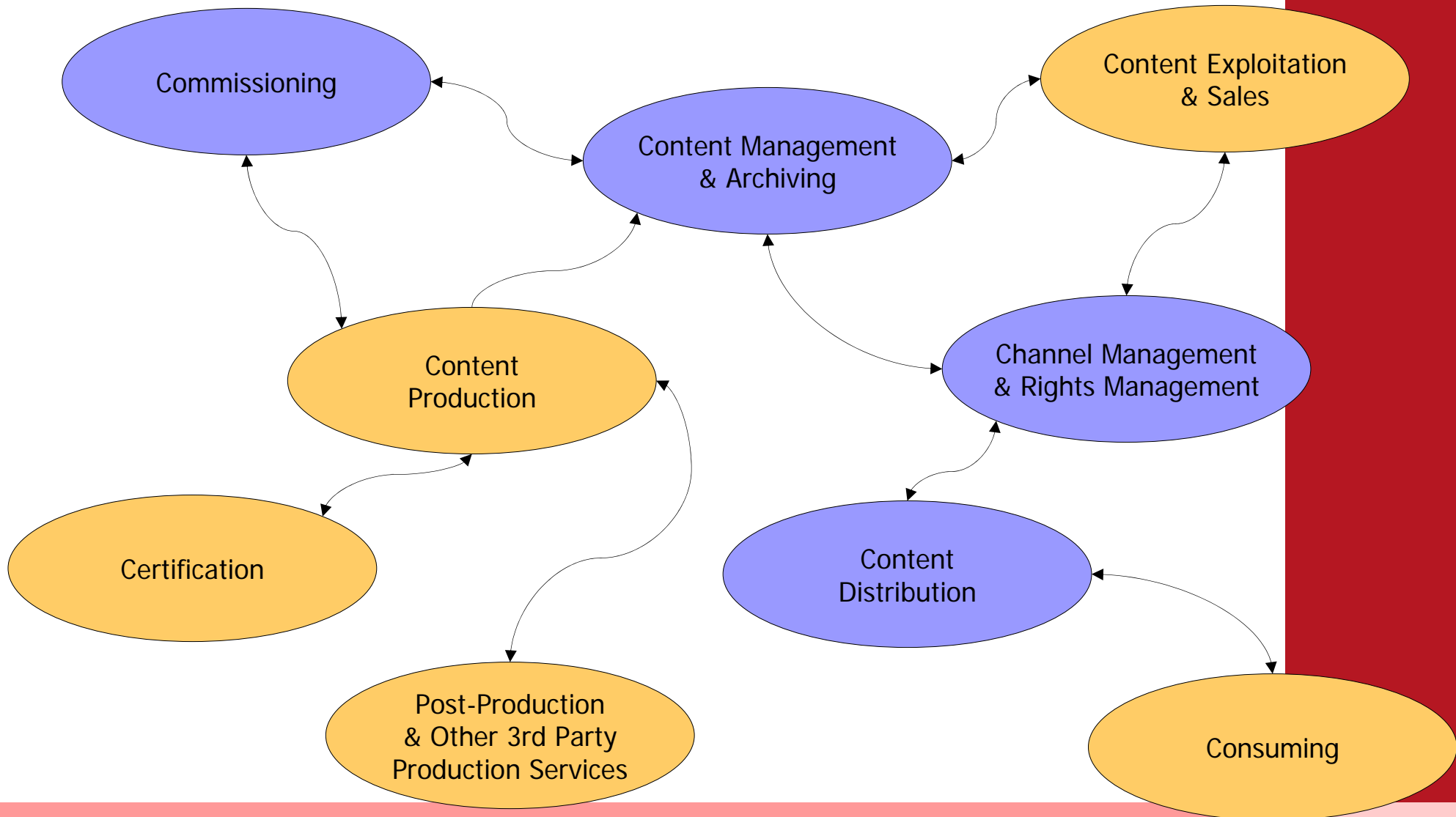
Put yourself in the position of a

- **Content Producer**
 - Film or Programme Maker
 - Corporate Communications Company
 - Advertising Agency
 - Brand Name Companies
 - ...
- **Content Distributor – often a Content Producer as well**
 - Digital Broadcaster
 - iTV Provider
 - ISP or Broadband Content Service Provider (CSP)
 - Web or Wireless Portal Provider
 - 3G
 - ...

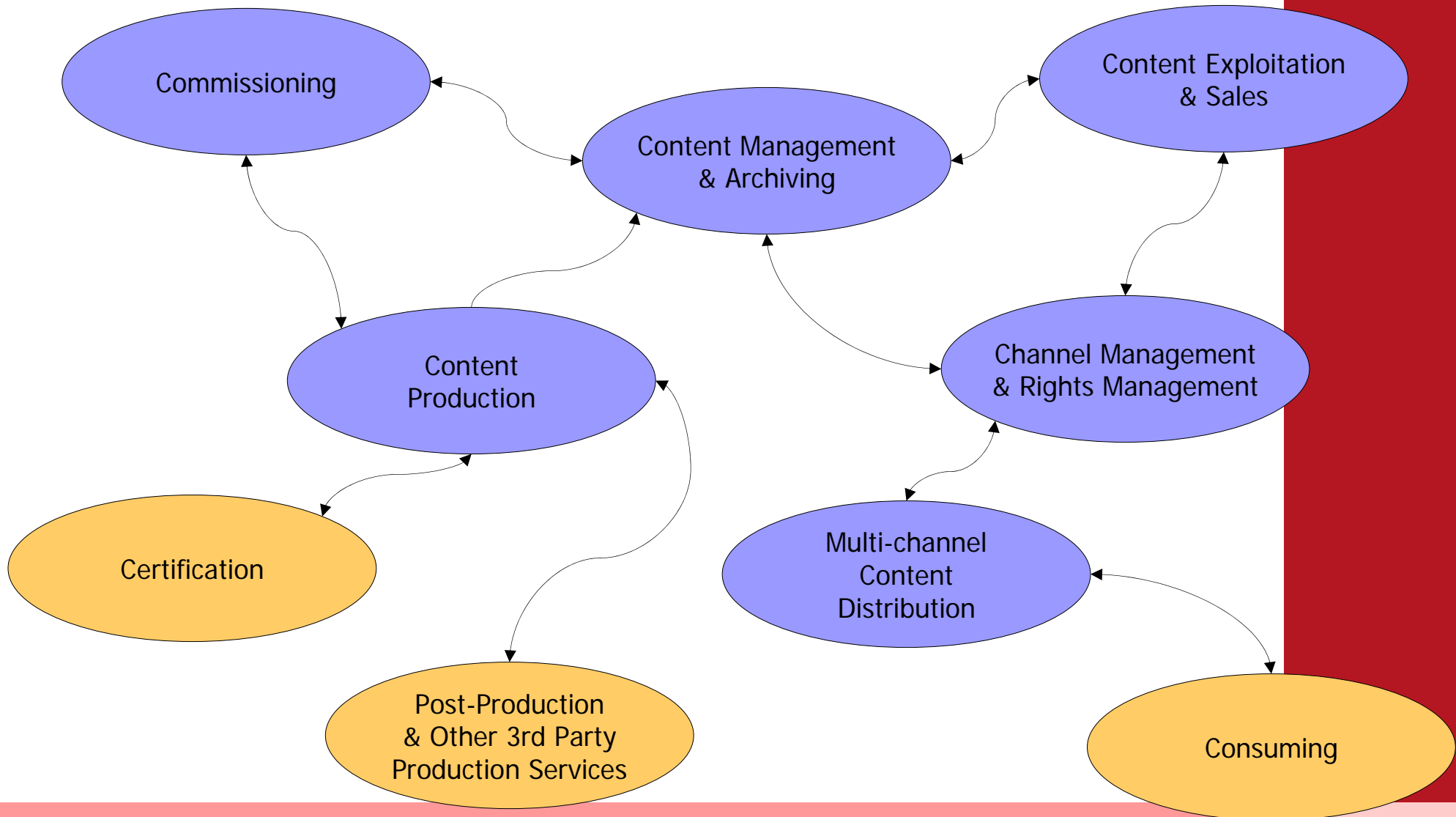
Independent Production Company



Broadcast Only Company



Production & Broadcast Company



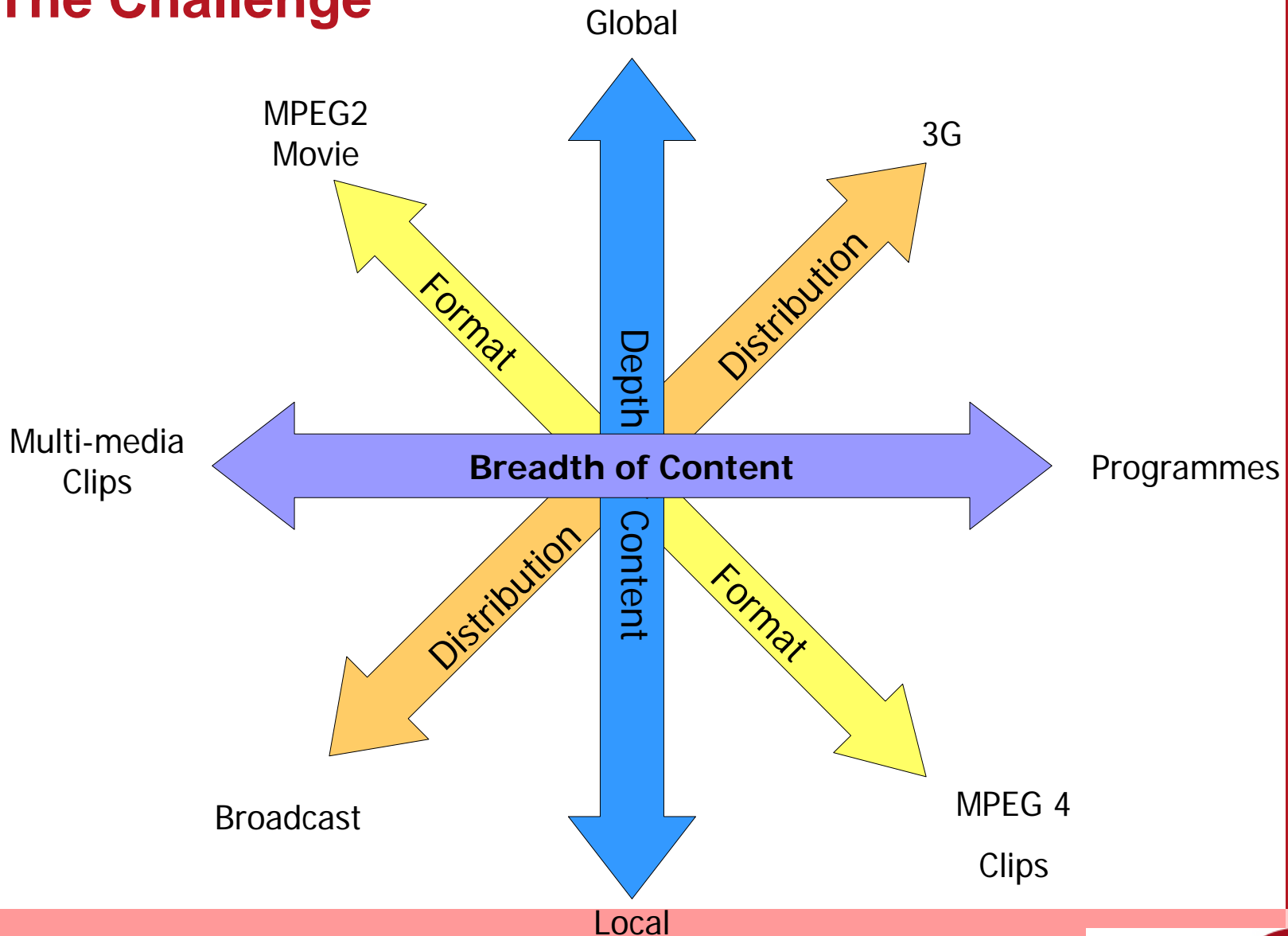
The Changing Face of Content

- **Core business activity**
- **Compelling content will drive majority of new services**
- **Content is key to the user experience**
- **Business change - not just technology implementation**
- **Challenges traditional culture and skills**
- **Must include metadata standards**
- **Must include rights management**

Business Drivers

- **Access & reuse of content**
- **Flexibility & responsiveness**
- **Exploitation management**
- **Rights management**
- **Billing & e-commerce - B2B & B2C**
- **Time to market**
- **Communication & co-ordination**
- **Efficient catalogue management**
- **A new business**

The Challenge



Business & Technology Challenges

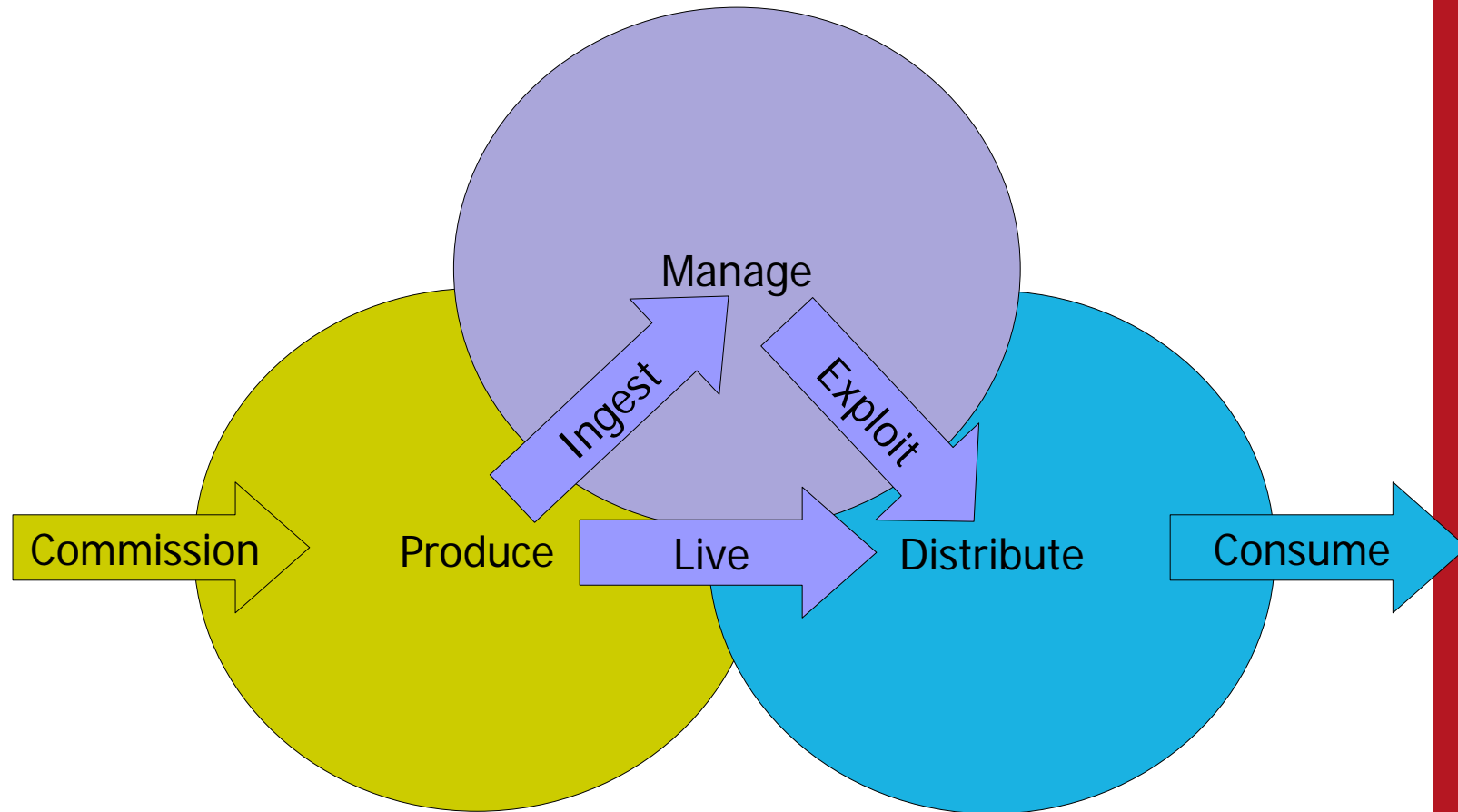
- **Business**

- Breadth of Content
 - Categories
- Depth of Content
 - Global to Local
- Scope of Digitisation
 - Criteria for selecting reusable or exploitable Content
- Common Processes
 - With sufficient flexibility to deal with any breadth and depth of Content

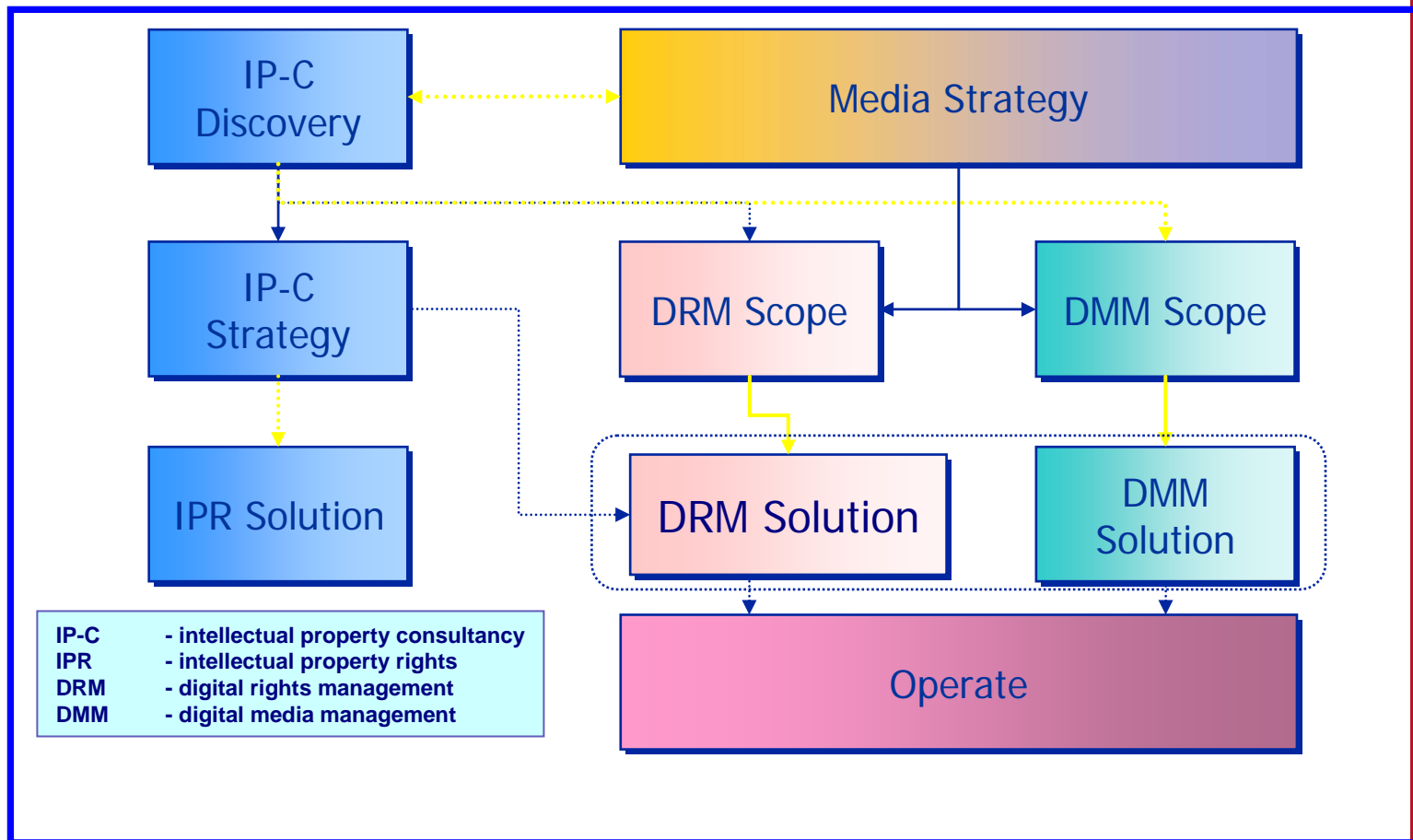
- **Technology**

- Effective Repurposing
 - Multi-Format
 - Multi-Platform
- End-to-end Digital
 - Minimise D2A and A2D conversions
- Distributed
 - Geographically
- Common Technology
 - Flexible framework approach

Process Domains



Our Approach



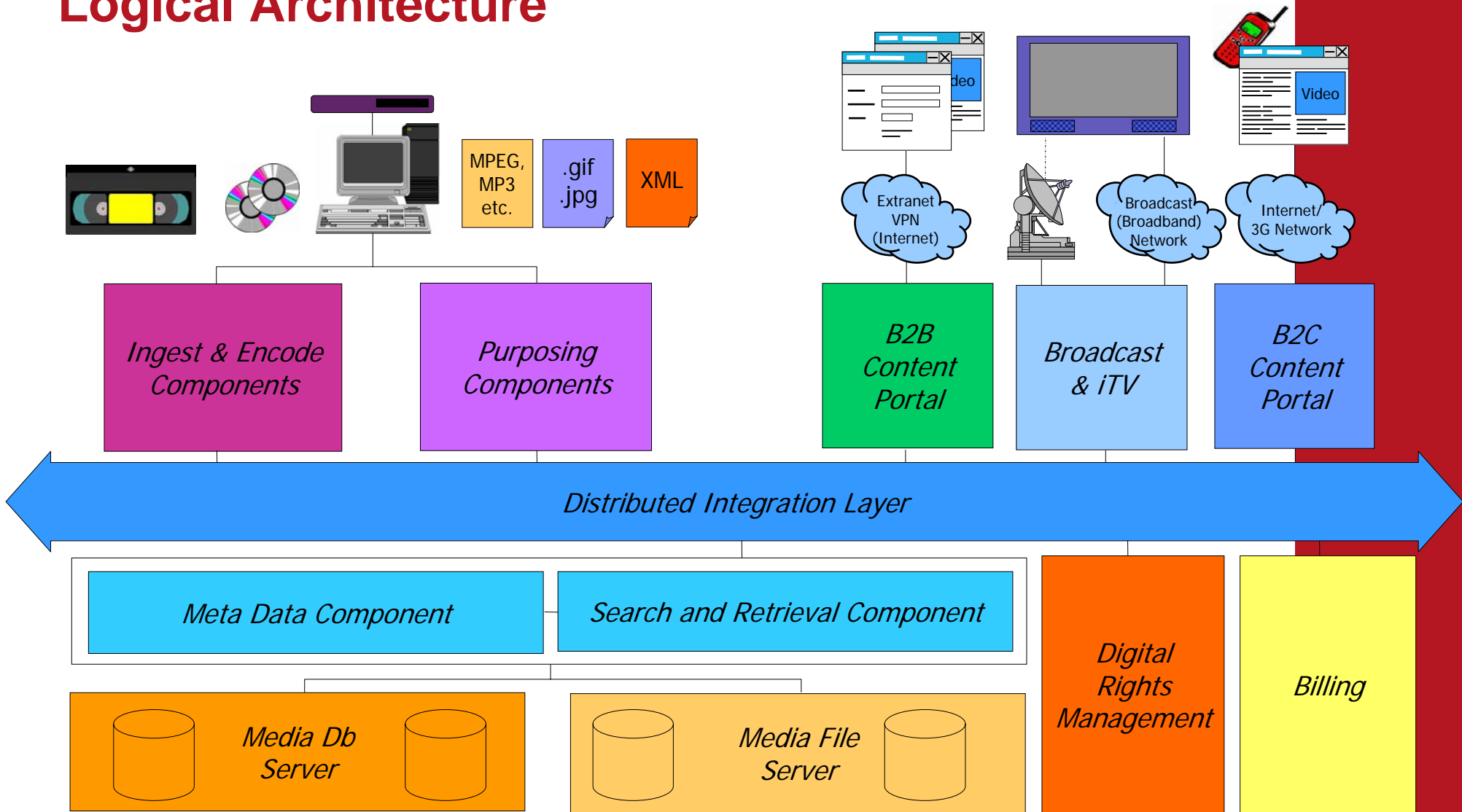
digital media Management

Solution Framework

Why a Framework?

- **Focuses the Solution on being Architecture based (longer life expectancy)**
- ***Relatively* Product Independent (allowing a multi-Vendor approach)**
- **Standards Based (where appropriate, delivering higher integration capabilities)**
- **Flexible and Adaptive (to deal with dynamic requirements and new technology)**
- **Implementation Driven by Business Benefit (incremental implementation based on Business Benefit without undermining the Architecture)**

Logical Architecture



Key Business Processes

- **Commissioning**
- **Content Production**
- **Content Management & Archiving**
- **Rights Exploitation & Sales**
- **Channel Management & Rights Management**
- **Multi-channel Content Distribution**

Key DCM Functionality

- **Content Production**
 - Create
 - Ingest
 - (Re)Purpose
- **Digital Asset Management**
 - Store (& Long Term Archive)
 - Search
 - Retrieve
- **IPR Management (Interfaces)**
 - Rights Exploitation & Sales - Production
 - Channel based Rights Management - Distribution

Key DCM Functions

- **Content Distribution**
 - Channel Management
 - Multi-Channel Distribution
- **Billing (Interfaces)**
 - B2B Billing - Production
 - B2C e-Commerce & Consumer Billing - Distribution
- **Common Functions (Services)**
 - Security & Access Control
 - Meta Data
 - Workflow

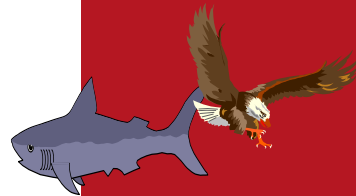
Business Benefits

- **Increased accessibility & time savings**
- **Reuse of assets & lower production costs**
- **Integration with digital editing**
- **Efficient re-purposing of content**
- **Management & exploitation of rights**
- **Reduction in physical storage & transport**
- **Close integration with digital multi-channel distribution**
- **Reduced time to market**

Why is DCM and DRM more than technical issues

Business in 1900's BD (Before Digital)

- Commercial Operations were on the whole capable of geographical delineation
- Content was 'secure' quality/volume copying was expensive
- The number of content buyers and sellers was small
- Re-use and re-purposing of content was time consuming and costly
- Channel outlets were limited
- Content had a finite 'shelf life'
- ***Most Content had limited or zero value !***



BD Economic Environment

- **Intellectual Property laws were territorial**
- **Most countries who had IPR legislation had not altered it for almost 200years (photocopying was a minor hiccup)**
- **Content Owners and Creators lived and had commercial operations in the same country for taxation purposes**
- **The business model was predominantly B to B**
- **Relatively few transactions of large amounts.**
- **The content industry was built on trust**
- **Infringement of rights was usually by accident than intent**

Technology BD - it did exist!!!

- Content management was important only for 'live' content
- Archive material was 'catalogued' in boxes and placed in lonely warehouses
- Rights contract management was often a manual exercise although some packages did exist.
- Rights management packages were often employed however their functionality was limited to the problems of the day.
- **Technology did not start with the internet or the digital age!**

Business PD (Post Digital)- Opportunities

- There are many channels to market
- There are many territories to sell into
- There are many formats to sell
- Shelf life of the asset can be extended by reuse
- New business models emerging
- New content can be created by computers alone
- The demand for content is high
- The price for Rights is escalating
- **There is a vast and expanding market !**

Business PD (Post Digital)- Threats

- Copying content to a high quality is easy, cheap and anyone can do it.
- All Content is a series of 00000s and 111111s.
- Content can be re-purposed / adulterated by anyone
- The internet has reared a belief that content/information should be free
- Global distribution means content can be trafficking around the globe.
- Legal territories have different legislation and different rules for enforcement
- Where content is distributed and where it is sold can have a major impact on the tax bill of an organisation
- **Stopping all the above costs money !**

Technology PD

- **The business expects technology to take away the threats from the digital world.**
- **The technology is not mature. It is a relatively new industry. There are major differences in approach from the different vendors.**
- **There are no definitions of Digital Content Management ,Digital Asset Management or Digital Rights Management.**
- **The business case is not in the cost saving but in the business opportunities**
- **Implementations of any software must be aware and take account of any legacy**
- **Security must be across the entire business system both manual and technology. It must be appropriate to the loss or the cost to the business of it not being there.**

The Business/Technology responsibilities

- To define the business model that it wants to operate now and to define future business models
- To define where it is within the value chain.
- To define the market place
- To define the content to be sold
- To define the pricing
- To assess the risk and take responsibility for the decisions it makes
- To define the appropriate technology to satisfy the business concept.
- To provide security and DRM mechanisms that enable the business to buy content rights
- To provide content management facilities to enable ingest storage, retrieval, reuse, re-purposing and distribution in a cost efficient and appropriate fashion
- To assess the technology risk and take responsibility for the recommendations and the decisions it makes

To jointly define the business case

In the digital world technology and commerce must be a partnership. Technology provides the opportunity and support but it can also provide the risks.

Responsibility for success lies with both groups providing insight into the art of the possible

Myths, Potions & Observations

Myths, Potions and Observations 1

- **The world is all digital !**
- **Everyone is making a fortune in selling content.**
- **The world is a common business environment.**
- **After digitisation the world will get back to stability**
- **The big players are going to be out of business**
- **The big players are going to take the lead**
- **Traditional Digital Content Management and Digital Rights management software houses have the edge over newcomers**

Myths, Potions and Observations 2

- **All your existing content is worthless**
- **All your existing content is worth a fortune**
- **Content can be a series of 00000s and 111111s therefore the management of audios, videos, text is going to be the same.**
- **Global Standards are being adopted**
- **There are standards for everything**
- **There is a best in breed for Digital Content Management and Digital Rights Management**

Myths, Potions and Observations 3

- **All Digital Content Management DRM packages cover the same ground**
- **Content is owned**
- **Content Packages do what they say they will do**
- **Everybody else has the ideal system**
- **Technology can provide all the opportunities and remove all the threats from digital world.**

Intellectual Property Rights & Digital Rights Management

The importance to the business

Contents

- **Background/Introduction**
- **Business Issues**
- **The Market**
- **Business Models**
- **Technology**
- **Case Study**

Objectives of Digital Rights Management

- **To be paid for the rights distributed to customers**

- **To prevent being sued**

These two objectives lead organisations into a business and technical complexities not envisaged 2-3 years ago.

What is Intellectual Property (IP)?

- **Intellectual property is information that derives its intrinsic value from creative ideas. It is also information with a commercial value.**
- **Intellectual Property Rights (IPRs) are bestowed on owners of ideas, inventions and creative expressions that have the status of property. Just like tangible property, IPRs give owners the right to exclude others from access to or use of their property.**
- **The first international treaties covering IPRs were created in the 1880s and have been updated many times. These are administered by the World Intellectual Property Organisation (WIPO), a UN agency established in 1967.**
 - **The Paris Convention for the Protection of Industrial Property**
 - **Berne Convention for the Protection of Literary and Artistic Works**

Background/Introduction

The Four Main Types of Intellectual Property

- © - Copyright - protects the expression of ideas (intellectual creations) such as writing, music and pictures
- ® - Patents - protect inventions, designs objects, manufacturing processes or products
- TM - Trademarks - protect symbols associated with goods/companies such as brands or the names of firms
- ? - Trade Secrets - protection of confidential business information

It is often the case that several different types of property rights are applicable to a single product.

Intellectual Property and the Digital Era

- **The newly revealed physics of information transfer on the net will change the economics and perhaps ultimately the laws governing the creation and dissemination of intellectual property.**
- **The net poses challenges both for owners/creators/sellers and for users of intellectual property as it allows for essentially cost-less copying of content, it dramatically changes the economics of content.**
- **It is easy to copy but hard to find content, creativity will proliferate, but quality will be scarce. Logistics alone used to add value to IP- it does so no more.**
- **The Intrinsic value of content in the aggregate will remain high, but most individual items will have a short commercial half-life on the net. Content providers operate in an increasingly competitive marketplace where much content is distributed free.**

Key Business Issues

The key issues

- **Organisations need to address five key issues if they are to fully realise the potential in their intellectual property.**
 - **Ownership** (who owns what and under what circumstances)
 - **Distribution** (controlled distribution or mass distribution?)
 - **Protection** (what content do they need to protect and the level of protection required)
 - **Globalisation** (what is acceptable in one country may have legal implications in another)
 - **Standards** (understand what standards are in development and how these may affect system development)

Ownership In The Digital World

- **Prior to the Internet and the WWW it was difficult to dissect intellectual property, the message, from the medium in which it travelled. Much has changed.**
- **Many regard the Internet as a threat to intellectual property and seek to change laws to protect their interests, yet this new medium has brought about fresh business opportunities for those involved with intellectual property.**
- **Businesses that over-react to these changes and view them as losses risk missing out on potential gains. Instead, the key to benefiting from them is to embrace change, take care not to over-reach and over-react and to educate your public.¹**

* ¹ *William S Strong "Copyright in a Time of Change"*

Content and Ownership Issues

- **Different types of content have different ownership issues**
 - film rights often acquired on a world-wide basis
 - publishing rights are likely to be territory specific
 - textual material may well be associated with well known illustrations which are under their own copyright
 - music is usually owned by the author or record companies

The Market & Issues

Market Trends - A Brief Outline

- **Copyright - Issues and costs**
- **Patent - The growing importance of protection**
- **Trademarks - Protecting brands in the new economy**
- **Future protection methods - Where are we headed**

Intellectual Property plays a significant part in all industry sectors, not just in Media.

Copyright - Issues and Costs

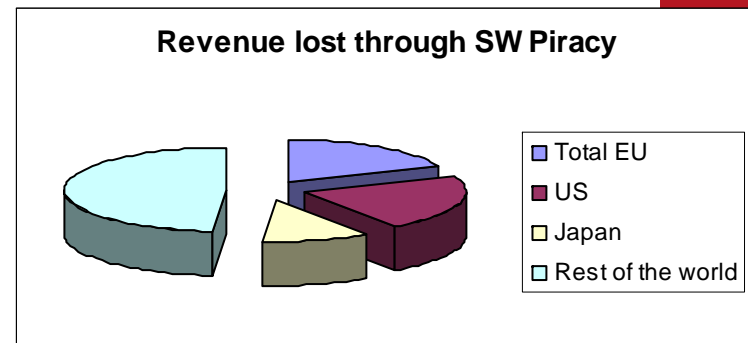


Copyright affects all creators of ideas, including literature, music, films as well as software. It is becoming increasingly important to be able to protect copyright because in the networked world that we live in it is much easier to infringe on copyright! For example, a physical book can only be read by one person at one time. The rights to that book are bound to the asset itself. However, once that book is published on the web it can be accessed by many users simultaneously!

A recent high profile example of copyright infringement is Napster! They were accused of allowing distribution of copyrighted material. Their offer of \$1 billion over 5 years to settle the case was snubbed because the music industry felt that revenue from the sale of copyrighted songs would be billions of \$ per year!

Software is also protected under copyright law. The chart on the right shows that \$11.5 billion was lost as a result of software piracy in 1996, much of that in the European Union. That figure is increasing!

According to a Business Software Alliance study, software piracy caused the loss of more than \$12 billion in revenue world-wide in 1999, which translates into nearly 107,000 lost jobs and more than \$5 billion in unrealised wages in the United States alone.



Patents - The Growing Importance of Protection In The Manufacturing Sector



The protection of patents is extremely important to pharmaceutical companies developing new drugs. Just how much protection is valued is well illustrated by the example below.

When the Brazilian government announced that it would increase the level of protection for patents of drugs under development, the reaction of the major pharmaceutical companies immediate and the impact on the country's economy was enormous!

- Roche has announced plans for a Latin American clinical research centre in Brazil
- Glaxo Wellcome is building a \$160 million manufacturing plant in Rio de Janeiro
- Bayer has announced plans to build a research centre
- SmithKline-Beecham will build a \$70 million factory
- Hoechst Marion Roussel has announced investments of \$100 million
- Astra, which sold off its Brazil facility in 1981, will move back to Brazil with a \$10-\$12 million production facility
- Pharmacia & Upjohn will increase jobs in Brazil by 150 percent
- Pfizer will increase production in Brazil by 50 percent and will create a research centre capable of, among other things, adapting medicines to local conditions
- Eli Lilly will invest \$82 million by the year 2000, in production, research, training, and equipment

Trademarks - Protecting Brands on the WWW

TM

Both companies and individuals value their brands. Millions are spent by marketers to build up brand names so it is important that the image that a brand promotes is protected

Cybersquatting and typosquatting pose an enormous threat to brands of both companies and individuals. For this reason, the general trend is to be extremely protective of trademarks, even typos of trademarks! The problems associated with this are exacerbated by the increase in the number of top level domain names - trademarks need to be watched a lot more closely! Some examples include:

- **April 2001:** author winning the rights to net names. This follows the precedent set by the high profile madonna.com case where the artist won the right to her brand!
- **www.peta.org (1999):** People for the Ethical Treatment of Animals versus the parody site 'People Eating Tasty Animals'. Parody is protected under the 1st Amendment!
- **verizonreallysucks.com** and **f**kgeneralmotors.com**: The person who registered these was sued. His response was to register **VerizonShouldSpendMoreTimeFixingItsNetworkAndLessMoneyOnLawyers.com** a blow to the Verizon brand as the site became quite popular!
- **www.lfc.com** - no, not Liverpool Football club, the city's fishing club!
- **www.wwf.com** - Currently a court case over ownership of the domain name between the Worldwide Wrestling Federation and the Worldwide Fund for Nature!

A Case Study for Online Domain Name Protection

A luxury goods company planning to launch an online presence wanted to review how their trade marks featured on the internet to assist them in establishing a policy for over 15 leading brands.

Netsearchers undertook an Internet Audit for each of the 15 names and after reviewing the results with the client, helped them to establish a year-round net protection strategy including:

- A cycle of global domain name registrations made to a uniform template
- NameSafe management of domains to ensure they were maintained in good health
- NameWatch monthly global domain name watching to identify confusingly similar and infringing names
- A policy for tackling domain name infringement and direct action to reclaim five key names taken by third parties
- Monthly brand patrol monitoring to reveal web and discussion group references of concern
- Quarterly competitor monitoring of 12 selected web sites identifying highest and lowest price goods, search engine rankings, models of e-commerce etc.

After just six months, the client was in charge of his intellectual property - with a strong portfolio of domain names, effective monthly monitoring, a domain registration service that could be used across the company and success against infringers with over 100 sites shut down.

Protection Against IP Infringement - Where are we headed?

Some form of protection is offered by global bodies & organisations (WTO, WIPO, ICANN). Over the years a number of agreements have been ratified which have had a significant impact on Intellectual Property ownership

- Input slide re: different orgs (get from CB)

Companies will also need to take more proactive action. It is expected that the business model will focus more on prevention and reduction of risk rather than cure to problems.

- Networks of subscribers to enable easier tracking of assets
- pay per use models. The ability to handle micro-payments is to become increasingly important. In trying to combat piracy, Microsoft are expected to offer MS Office as a centralised service (as opposed to software that sits at the user's end). Under these conditions, it will be much easier to verify authentic licences!

Business Models

New Business models are being explored which are being driven by fundamental changes

- **Economies are becoming information based, competition has become global and many enterprises' competitive advantages are based on continuous innovation**
- **The digitised world has fundamentally changed the nature of business**
- **Survival depends on the enterprises ability to uncover, develop, leverage and protect intellectual assets**
- **Much chargeable value will be in certification of authenticity and reliability, not in the content itself. Brand name, identity and other marks of value will be important; so will security of supply. Customers will pay for a stream of information/content, from a trusted source**

IPR issues will effect business models for various players in the market



- **Content Author/Creator** e.g. BBC, Reuters or any other media or non media company that produces content for internal or external use
- **Content Publisher/Aggregator** e.g. IPC Magazines, Flextech television, BSkyB who buy various content and aggregate it into channels aimed at a particular lifestyle or niche
- **Content Distributor** e.g. W H Smith News, BT, BskyB, NTL, the internet
- **Service Provider/eTailer** e.g. Amazon.com, Yahoo.com

Content Creators face many issues as result of digitisation of content

Author/
Creator
Creates
Content

Issues

- **Content Creators need to protect the IPR for their content in the digitised world.**
- **They need to produce content that can be transmitted through multiple delivery channels.**
- **They are faced with selling their content in different countries with different taxes .**
- **They need categorisation and metadata.**

Content Creators - opportunities to earn revenue

Opportunities

- They can reduce costs by using digital mechanisms and digital media management technologies.
- They may be able to replace outdated systems such as manual storage/tape reels dependent on the revenue opportunity.

Revenue

- They can auction their content.
- They can sell niche content.
- They can segment production - breaking a clip down into frames etc
- They can produce one basic product but with regional inserts and sell over different geographies.

Content Aggregators face many issues as result of digitisation of content

Publisher/
Aggregator
Packages
Content

Issues

- They need to acquire IPR to reuse content
- They need to send content through many delivery channels
- They need to repurpose the content
- It will be difficult to find content that is economical to sell
- It will be difficult but important to find quality content
- They need to secure their content
- They need to decide how valuable the aggregation is
- They need to protect their brand and the brand of the content they are aggregating

Content Aggregators - opportunities to earn revenue

Opportunities

- They can use watermarking and encryption to protect content.

Revenue

- They can repurpose content using DMM technologies and sell to many distribution channels.
- They can attract advertisers by producing quality programming for a niche market .
- Sell other services through the content medium.

Content Distributors face issues and opportunities as result of digitisation of content

Distributor
Holds
Protected
Content

Issues

- It is difficult to protect content without severely restricting reach
- Distribution channels need to protect their brand as this is often more valuable than the content itself.
- Their brand will be damaged if the quality of content they are distributing falls.

Opportunities

- The internet will be used as distribution channel for content. Global reach/global opportunities
- The internet can be used to buy rights to content.
- Rights can be protected by using metadata, keys, tokens etc.

Service providers face issues and opportunities as a result of digitisation of content

Service
Provider/
eTailer
Sells
Content

Issues

- Large software companies need to get out of the market for DMM or buy small companies but let them run themselves
- Small software companies whose quality is assured by market standards will take market share from big software companies

Opportunities

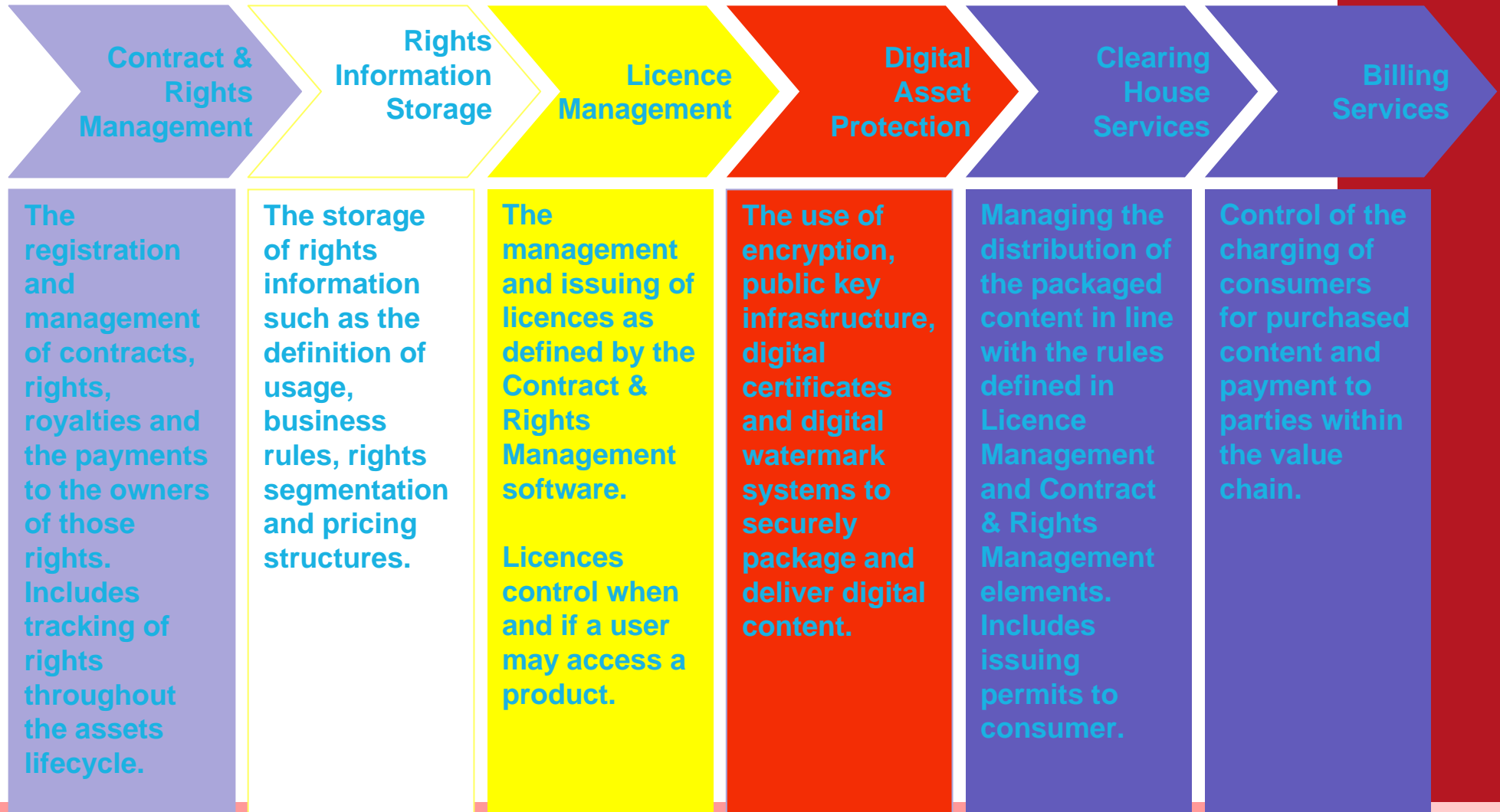
- Software for protecting rights will be a big seller. Software companies need to make sure that they satisfy security requirements of the content producers in protecting their rights and cater for differing protection levels

How to leverage intellectual property to achieve its maximum value, without limiting access or hoarding ideas?

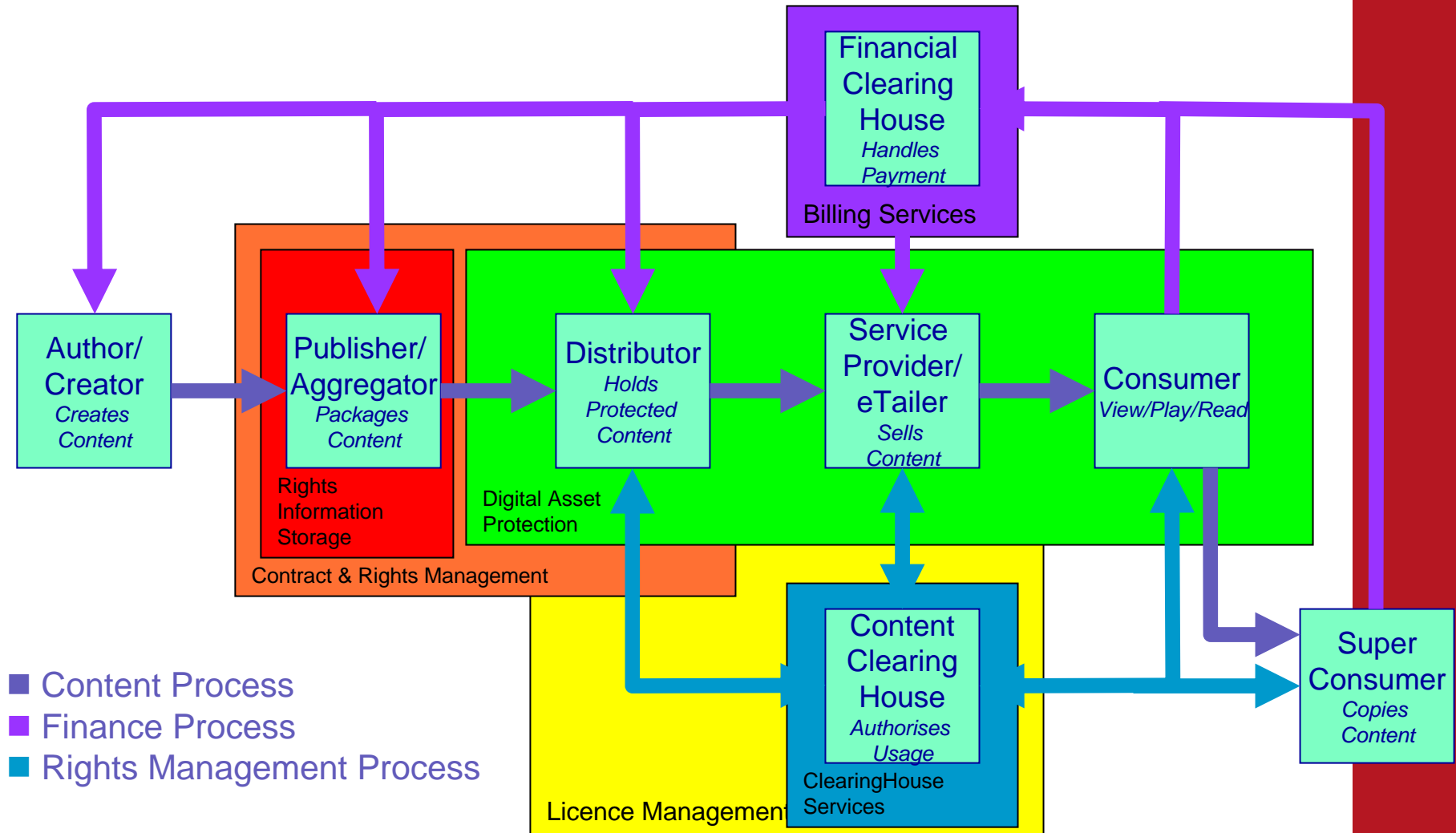
- The only nonreplicable value will be people's presence, time and attention. In order to sell that presence, time and attention outside their own community, creators may have to give away content for free. *E.g. The Grateful Dead do this by encouraging people to tape their performances. Many of the people who copy and listen to these tapes will end up paying for hats, t-shirts, and tickets to their shows. The ancillary market is the market.*
- While content may not be entirely free, the economic dynamics will tend to operate as if it were. Content will serve as advertising for services such as support, aggregation, filtering, assembly and integration of content modules, or training - or it will be a by-product of paid-for relationships
- Greatest dilemma is for content providers to decide what to charge for and what to give away for free
- The non-market economy where production and consumption both occur within a non-commercial community. Outside that community, people may become hunters and gatherers of information supplied "free" by advertisers.

The general business model is likely to be that most Content will be sold for 'free' but users will be charged on the basis of the relationship with the content creator, aggregator or distributor e.g. on a subscription basis or merchandising.

The Digital Rights Management Value Chain



The Process in the Context of the Business Model



Dos and Don'ts of Digital Content Management & Digital Content Management

Dos and Don'ts of Digital Content Management & Digital Rights Management

- **Dos**
 - ✓ **Digital Content Management must be closely integrated with Digital Rights Management**
 - ✓ **Digital Content Management has to be regarded as a strategic investment**
 - ✓ **Digital Rights management must be in place before content is commercially exposed.**
 - ✓ **Content must be managed according to the contract.**
 - ✓ **Business must understand the technology to be able to negotiate**
 - ✓ **Digital Rights must cover digital rights billing**
- **Make sure your digital rights management system covers the type of contract you are likely to engage in**

Dos and Don'ts of Digital Content Management & Digital Rights Management

- Don'ts

- ✗ Wait until you are sued to implement Digital Content Management /Digital Rights Management
- ✗ Rely on cost savings for the business case-- exploitation is key
- ✗ Try to create your own standards
- ✗ Believe all systems cover the same ground
- ✗ Forget that rights billing means rights payments.
- ✗ Believe that packages automatically fit together.